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THE BIRD LIFE OF THE GULF COAST REGION OF MISSISSIPPI

By THOMAS D. BURLEIGH

Considering the accessibility of the Gulf coast of Mississippi, and the variety and attractiveness of its bird life, one is rather surprised at the meager ornithological information available concerning it. Forty years ago Andrew Allison made a brief study of the winter bird life of Hancock County, in the southwestern corner of the State, but otherwise this stretch of coast has been largely neglected. The geographical position of southern Mississippi is probably one reason for this. Ornithologists with a desire to become familiar with southern bird life apparently could not resist the lure of Florida, or of Louisiana, and as a result the intervening area was given little consideration when field work was planned. Even today few ornithologists can claim more than a casual acquaintance with this section of the southeastern United States.

From September, 1935, to September, 1943, I resided in Gulfport, the county seat of Harrison County, Mississippi. During those eight years a detailed study was made of the bird life of the three coastal counties, Hancock, Harrison, and Jackson. This area covers all of extreme southern Mississippi lying between the Louisiana and Alabama state lines. Although I was frequently absent from Gulfport for a month or more at a time on other field work, at least eight months of each year were spent on the Mississippi Gulf coast. This enabled me to acquire a reasonably complete knowledge of its bird life.

Character of the Country

The three coastal counties of Mississippi are representative of the coastal plain that borders the Gulf of Mexico from the Atlantic coast westward into Texas. The topography is level to gently rolling, with an elevation of approximately 20 feet above sea level at the highest point. On the mainland there existed originally an almost unbroken stretch of open forest in which the principal species was the longleaf pine (*Pinus palustris*). At the present time very little of the original forest remains, unrestricted logging

FIGURE 1. View of Deer Island Showing Open Pine Woodland

having gradually replaced the stand of virgin timber with open slashings and a rather open second growth of smaller trees. In wet places, and along the borders of streams, the slash pine (*Pinus caribaea*) occurs, but only in rather limited areas is it the predominating species. Streams are numerous and are bordered by a margin of swampy soil that supports a thick growth

of hardwoods and a sprinkling of slash pines and cypress (*Taxodium distichum*). Among these hardwoods the principal species are the evergreen magnolia (*Magnolia grandiflora*), the red bay (*Persea borbonia*), the swamp black gum (*Nyssa biflora*), the tupleo gum (*Nyssa aquatica*), and the water ash (*Fraxinus caroliniana*). In the wide stretches of pine woods the predominating undergrowth is the gallberry (*Ilex glabra*) and the saw palmetto (*Serenoa serrulata*), with several species of oaks, notably the post oak (*Quercus stellata*) and the black-jack oak (*Quercus marilandica*), occupying the more open sites. Fringing the coast itself are large

FIGURE 2. Live Oaks at Extreme Western End of Deer Island

live oaks (*Quercus virginiana*) that in places cover a considerable area characterized otherwise by an almost impenetrable undergrowth of wax myrtle (*Myrica cerifera*) and rosemary (*Ceratiola ericoides*).

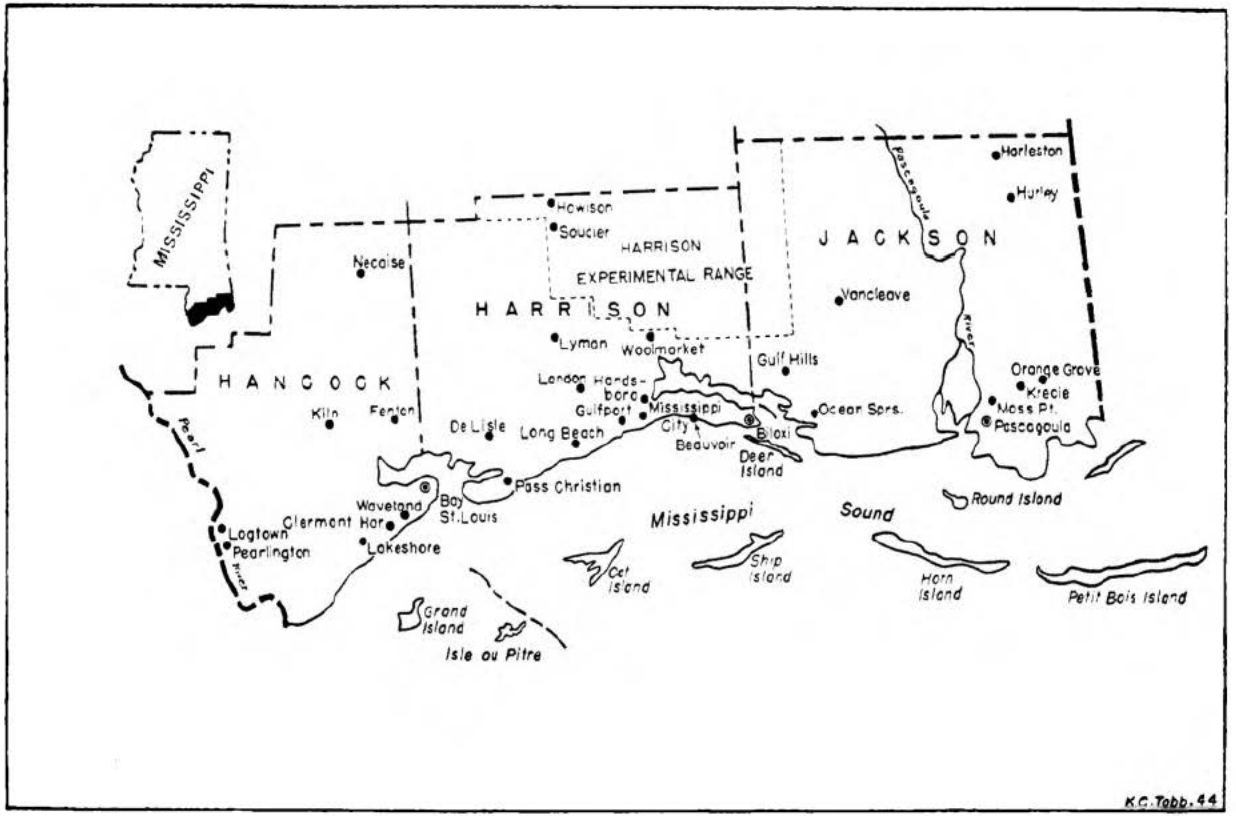
The islands lying offshore are to a large extent similar in their vegetation to the mainland; the one exception is that the longleaf pine is replaced

entirely by the slash pine. On both Petit Bois Island and Horn Island, each 16 miles from the mainland, there are but few live oaks, whereas on Ship Island and Cat Island, there are numerous groves of these trees. On Deer Island the live oak reaches a size equal to that attained on the mainland and is well distributed over the island. Deer Island is readily accessible since at its closest point it lies less than a mile offshore. It has been inhabited for many years by several families that live at the extreme western

FIGURE 3. Typical Open Growth Longleaf Pine on Mainland

end, opposite Biloxi. From time to time they planted about their houses such trees as the chinaberry (*Melia azedarach*), the sycamore (*Platanus occidentalis*), and the red cedar (*Juniperus virginiana*), and these introductions have influenced favorably the relative abundance of both breeding birds and transients.

As will be noted on the accompanying Map 1, four of the offshore islands (Petit Bois, Horn, Ship, and Cat) separate the mainland from the



MAP 1. Gulf Coast Region of Mississippi Showing Area Incorporated in This Work

Gulf of Mexico. The intervening water, varying in width from 9 to 16 miles, is known as the Mississippi Sound. These islands are long and narrow, and extend from the Alabama state line (part of Petit Bois is now considered in Alabama) to within a few miles of Isle au Pitre in Louisiana. In the opinion of geologists, the islands were orginally a part of the mainland.

The Bird Life

On the coast of Mississippi the bird life is that of the Lower Austral Zone, although certain breeding birds that usually characterize this zone, notably the Ground Dove and the Swainson Warbler, are present only as transients. The mainland as a whole can be considered as comprising three distinct ecological communities, each having its characteristic breeding birds. Most of the resident species remain on their breeding grounds throughout the year and thus do not shift habitats from one season to another. These communities and the breeding species represented, are as follows:

Open Pine Wood[1]

Little Sparrow Hawk (*Falco sparverius paulus*)
Eastern Bobwhite (*Colinus v. virginianus*)
Florida Sandhill Crane (*Grus canadensis pratensis*)
Eastern Mourning Dove (*Zenaidura macroura carolinensis*)
*Yellow-billed Cuckoo (*Coccyzus a. americanus*)
Florida Nighthawk (*Chordeiles minor chapmani*)
*Southern Flicker (*Colaptes a. auratus*)
Eastern Red-headed Woodpecker (*Melanerpes e. erythrocephalus*)
Northern Red-cockaded Woodpecker (*Dryobates b. borealis*)
Eastern Kingbird (*Tyrannus tyrannus*)
*Southern Crested Flycatcher (*Myiarchus c. crinitus*)
Eastern Wood Pewee (*Myiochanes virens*)
Brown-headed Nuthatch (*Sitta p. pusilla*)
*Eastern Mockingbird (*Mimus p. polyglottos*)
Eastern Bluebird (*Sialia s. sialis*)
Loggerhead Shrike (*Lanius l. ludovicianus*)
Northern Pine Warbler (*Dendroica p. pinus*)
Southern Meadowlark (*Sturnella magna argutula*)
Orchard Oriole (*Icterus spurius*)
Summer Tanager (*Piranga r. rubra*)
Bachman Sparrow (*Aimophila aestivalis bachmanii*)
Eastern Chipping Sparrow (*Spizella p. passerina*)

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[1] Species marked with an asterisk (*) are not limited in their distribution to the pine woods but are equally common along the streams.

Bottom Lands Bordering Streams

Ward Heron (*Ardea herodias wardi*)
Eastern Green Heron (*Butorides v. virescens*)
Florida Red-shouldered Hawk (*Buteo lineatus alleni*)
Broad-winged Hawk (*Buteo p. platypterus*)
Eastern Wild Turkey (*Meleagris gallopavo silvestris*)
Florida Screech Owl (*Otus asio floridanus*)
Great Horned Owl (*Bubo v. virginianus*)
Florida Barred Owl (*Strix varia georgica*)
Chuck-will's-widow (*Caprimulgus carolinensis*)
Southern Pileated Woodpecker (*Ceophloeus p. pileatus*)
Red-bellied Woodpecker (*Centurus c. carolinus*)
Southern Hairy Woodpecker (*Dryobates villosus auduboni*)
Southern Downy Woodpecker (*Dryobates p. pubescens*)
Acadian Flycatcher (*Empidonax virescens*)
Southern Crow (*Corvus brachyrhynchos paulus*)
Louisiana Chickadee (*Parus carolinensis guilloti*)
Tufted Titmouse (*Parus bicolor*)
Southeastern Carolina Wren (*Thryothorus ludovicianus euronotus*)
Eastern Brown Thrasher (*Toxostoma r. rufum*)
Wood Thrush (*Hylocichla mustelina*)
Blue-gray Gnatcatcher (*Polioptila c. caerulea*)
Southern White-eyed Vireo (*Vireo g. griseus*)
Yellow-throated Vireo (*Vireo flavifrons*)
Red-eyed Vireo (*Vireo olivaceus*)
Prothonotary Warbler (*Protonotaria citrea*)
Western Parula Warbler (*Compsothlypis americana ramalinae*)
Kentucky Warbler (*Oporornis formosus*)
Yellow-breasted Chat (*Icteria v. virens*)
Hooded Warbler (*Wilsonia citrina*)
Florida Grackle (*Quiscalus quiscula*)
Eastern Cardinal (*Richmondena c. cardinalis*)
Alabama Towhee (*Pipilo erythrophalmus canaster*)

Salt Marsh and Beach

Pied-billed Grebe (*Podilymbus p. podiceps*)
Eastern Least Bittern (*Ixobrychus e. exilis*)
Louisiana Clapper Rail (*Rallus longirostris saturatus*)
Florida Gallinule (*Gallinula chloropus cachinnans*)
Purple Gallinule (*Porphyrula martinica*)
American Coot (*Fulica a. americana*)
Cuban Snowy Plover (*Charadrius alexandrinus tenuirostris*)
Killdeer (*Charadrius v. vociferus*)
Wilson Plover (*Charadrius w. wilsonia*)
Eastern Willet (*Catoptrophorus s. semipalmatus*)
Least Tern (*Sterna albifrons antillarum*)
Fish Crow (*Corvus o. ossifragus*)
Louisiana Marsh Wren (*Telmatodytes palustris thryophilus*)
Florida Yellowthroat (*Geothlypis trichas ignota*)
Gulf Coast Redwing (*Agelaius phoeniceus littoralis*)
Boat-tailed Grackle (*Cassidix mexicanus major*)
Howell Seaside Sparrow (*Ammospiza maritima howelli*)

A few of the breeding birds seem not to be confined to any definite ecological community but have a wide range of habitats that are suitable for their needs. These are:

Black Vulture (*Coragyps atratus*)
Turkey Vulture (*Cathartes aura*)
Chimney Swift (*Chaetura pelagica*)
Eastern Belted Kingfisher (*Megaceryle a. alcyon*)
Rough-winged Swallow (*Stelgidopteryx ruficollis serripennis*)
Purple Martin (*Progne s. subis*)
English Sparrow (*Passer domesticus*)
Eastern Cowbird (*Molothrus a. ater*)
Eastern Painted Bunting (*Passerina c. ciris*)

On the islands, the breeding birds are plentiful so far as actual numbers are concerned, but scarce with respect to species. Conditions are apparently suitable for a larger number of resident and summer visitant species than actually occur there. A surprisingly large number of birds show a decided reluctance to cross even the narrow stretch of water separating Deer Island from the mainland. At no time did I record on Deer Island such common mainland species as the Southern Pileated Woodpecker, the Southern Hairy Woodpecker, the Red-cockaded Woodpecker, the Southern Crow, or the Louisiana Chickadee. The Bluebird is resident on Horn Island, but otherwise is almost unknown offshore. The Cardinal occurs on Deer Island and on Cat Island, but was never seen on the other islands lying farther out in the Gulf. The following species are definitely known to nest off the mainland. Unless otherwise specified they occur in approximately the same numbers on all the five islands.

Eastern Green Heron (*Butorides v. virescens*)
Eastern Least Bittern (*Ixobrychus e. exilis*)
Southern Bald Eagle (*Haliaeetus l. leucocephalus*). Cat and Ship Islands.
American Osprey (*Pandion haliaetus carolinensis*). On all except Deer Island.
Louisiana Clapper Rail (*Rallus longirostris saturatus*)
Cuban Snowy Plover (*Charadrius alexandrinus tenuirostris*). Ship Island only.
Killdeer (*Charadrius v. vociferus*). Deer Island only.
Wilson Plover (*Charadrius w. wilsonia*)
Eastern Willet (*Catoptrophorus s. semipalmatus*)
Least Tern (*Sterna albifrons antillarum*)
Eastern Mourning Dove (*Zenaidura macroura carolinensis*)
Florida Nighthawk (*Chordeiles minor chapmani*)
Chimney Swift (*Chaetura pelagica*). Deer Island only.
Eastern Red-headed Woodpecker (*Melanerpes e. erythrocephalus*)
Eastern Kingbird (*Tyrannus tyrannus*)
Southern Crested Flycatcher (*Myiarchus c. crinitus*)
Gulf Coast Barn Swallow (*Hirundo rustica insularis*). Cat and Ship Islands.
Purple Martin (*Progne s. subis*). Deer and Ship Islands.

Southern Blue Jay (*Cyanocitta c. cristata*). Cat Island only.
Fish Crow (*Corvus o. ossifragus*)
Brown-headed Nuthatch (*Sitta p. pusilla*). Deer and Cat Islands.
Burleigh Carolina Wren (*Thryothorus ludovicianus burleighi*) All except Deer Island.
Southeastern Carolina Wren (*Thryothorus ludovicianus euronotus*). Deer Island only.
Eastern Mockingbird (*Mimus p. polyglottos*)
Eastern Brown Thrasher (*Toxostoma r. rufum*)
Eastern Bluebird (*Sialia s. sialis*). Horn Island only.
Blue-gray Gnatcatcher (*Polioptila c. caerulea*)
Loggerhead Shrike (*Lanius l. ludovicianus*)
Southern White-eyed Vireo (*Vireo g. griseus*). Deer Island only.
Northern Pine Warbler (*Dendroica p. pinus*)
Florida Yellowthroat (*Geothlypis trichas ignota*). Ship Island only.
Gulf Coast Red-wing (*Agelaius phoeniceus littoralis*)
Orchard Oriole (*Icterus spurius*)
Boat-tailed Grackle (*Cassidix mexicanus major*)
Eastern Cardinal (*Richmondena c. cardinalis*). Deer and Cat Islands.
Alabama Towhee (*Pipilo erythrophthalmus canaster*). Deer Island only.
Howell Seaside Sparrow (*Ammospiza maritima howelli*)

Migrants

To one familiar with bird migration farther north, the seasonal movements of birds on the Gulf coast of Mississippi is not only perplexing, but frequently rather disconcerting as well. This is especially true in the spring. The effect of weather on migration is not fully understood, but so far as the Gulf coast is concerned, weather is unquestionably the most important factor in determining the abundance or scarcity of transients on any given day. No attempt will be made here to discuss in detail the relationship between weather and bird migration on the Gulf coast for this has already been done at length by Lowery (In Press). However, a few comments may not be out of place concerning the various aspects of migration on the Mississippi coast.

The first perceptible northward movement of such species as the warblers and vireos occurs in early March. A few of the hardier migrants, notably the Purple Martin and the Florida Grackle, appear in February, but it is invariably between March 2 and 8, when the Black-and-White Warbler, the Parula Warbler, and the Yellow-throated Warbler are recorded for the first time. If the weather during the ensuing weeks is characterized by intervals of rain and strong winds from the northwest, as is frequently the case, transients are noted in large numbers, and the total list of species observed is large. On the other hand, the spring months may be unusually pleasant so far as the weather is concerned, with clear calm days following

one another week after week. Breeding birds appear at their accustomed time, and are soon engaged in rearing their broods of young. But the fields and woods under such conditions are singularly devoid of transients with even the commonest migrants going undetected throughout the entire spring. Repeated observations of this peculiarity of the spring migration leaves no doubt that weather is the primary factor determining the presence of absence of all species except those that breed in the Gulf coast region. Birds breeding farther north unquestionably pause after crossing the Gulf of Mexico only when compelled to do so by inclement weather. Without knowledge of this fact it would be difficult to explain why not only in March, but throughout April and early May as well, there are intervals of two weeks or more when practically no migrants are seen. Even more impressive than the almost complete absence of migrants is the amazing abundance of birds resulting when incoming arrivals from across the Gulf are forced to break their long journey northward because of bad weather.

For example, the spring of 1940 was marked by frequent rainy days. On April 26 I went to Deer Island anticipating that I would find a great concentration of migrants as a consequence of the rainy weather that had prevailed during the previous 24 hours. Just as expected, the island was teeming with birds. Every live oak, every bit of underbrush, swarmed with warblers, vireos, and thrushes. Even the open pine woods, normally avoided by such birds, harbored many individuals. By the end of the day the list of species observed included 20 different warblers, as well as practically every migrant that might be expected at that time of the year. A few days later, on May 1, I went to Ship Island and here, 16 miles offshore, the same abundance of transients was noted. Seldom or never have I seen a greater abundance of birds within a limited area. Such species as the Cape May Warbler and the Black-throated Blue Warbler, practically unknown as transients on the Gulf coast, were recorded that day, and other species that are seldom seen were relatively common. These are only two examples of many observations during periods of bad weather when great concentrations of migrants were noted.

In marked contrast, and typical of the opposite extreme, was the spring of 1943. That year the weather, after the middle of April, was uniformly clear and warm for an interval of over three weeks. Each day the temperature reached the eighties, and only a slight southeast wind prevailed. I was in the field each day, but few birds other than those actually breeding were recorded. Considering that this period fell during the height of the spring migration the dearth of migrants was striking. Actually I know of

no other area in the eastern United States other than along the Gulf coast where it is possible to be in the field day after day at this season of the year and to see practically no migrants. This pecularity of the spring migration on the Gulf coast explains the irregular status of many of the species discussed later in the annotated list. In the case of the warblers especially there is not even an approximate date when they can be expected to appear. They may be abundant one year and seen at frequent intervals, yet scarce or totally wanting the following year. If normally they are expected to arrive early in the spring, they may do so one year, but the following year they may not be seen until a month later. This is well illustrated in the case of the Black-throated Green Warbler. It is one of the early migrants in the Mississippi Valley where it appears regularly in late March as far north as northern Louisiana and Memphis, Tennessee. Aside from one record on the Mississippi coast on March 28, some years I did not see the first individual until the end of April, and there were several years when the few birds observed did not put in their appearance until early May.

In contrast to the spring migration the southward movement of birds in the fall is normal in every respect. The first transients, almost invariably young of the year, appear in early July, and by the end of the month such species as the Yellow Warbler, the Louisiana Water-thrush, and the Redstart, are plentiful and observed daily. Throughout August transients appear in increasing numbers, and the fall migration continues without interruption until after the first week in November. A few belated transients may be seen as late as early December, but ordinarily by the middle of November the bird life is characteristically that of the winter months.

An outstanding feature of the fall migration on the Mississippi coast is the prevalence of western forms at this season of the year. So pronounced is this phenomenon that there appears to be a definite west-east migration involving many species nesting in the western part of the United States. This feature of migration on the Gulf coast has been discussed in detail in another paper (McAtee, *et al.*, 1944) ; so it need merely be said at this time that birds of western origin are of regular occurrence in this region each year, and are noted in appreciable numbers.

Résumé of Field Work

The first field work undertaken on the Mississippi coast was apparently by C. S. Brimley. He was at Bay St. Louis from August 22 to September 16, 1890, and although he was interested primarily in mammals, he kept

notes on the birds observed each day, and collected a few specimens of such birds as he considered unusual.

He was followed in 1892 by Vernon Bailey, veteran field biologist of the United States Biological Survey (now the Fish and Wildlife Service). Bailey worked at Bay St. Louis from April 22-May 2. His collections were largely limited to mammals, but included a few birds of taxonomic interest. On the birds observed he likewise kept notes which are now in the files of the Fish and Wildlife Service.

H. H. Kopman carried on field work on the Mississippi coast at infrequent intervals from 1896 through 1918. In the files of the Fish and Wildlife Service there are notes on the birds he observed at Beauvoir (August 4-September 17, 1896, and July 5-September 7, 1897), at Biloxi (January 8-June 8, and July 23-August 30, 1906), and at Bay St. Louis (February 12, 1918). An occasional bird collected during this period is commented on briefly in articles that appeared in *The Auk* (Kopman, 1899, 1903, 1904, 1905, and 1907).

Andrew Allison (1899, 1900, 1906a and 1906b) was at Bay St. Louis in May and August, 1899, and in January, 1902, and again in February, 1904. During each visit he kept careful notes of the birds he observed, and made rather limited collections of the birds he considered of unusual interest.

Arthur H. Howell visited the Mississippi coast on several occasions. He was at Biloxi May 25-27, 1911, at various points between Pass Christian and Petit Bois Island July 2-7, 1913, and at Ship Island April 12, 1926. Although his records of birds observed were never published, he kept detailed notes which are now in the files of the Fish and Wildlife Service, and his specimens are in the Biological Surveys collection of that agency.

Ernest G. Holt was at Petit Bois Island July 28-29, 1913, and his notes on the birds observed there are likewise in the files of the Fish and Wildlife Service.

Fannye A. Cook spent several weeks in March, 1925, studying the bird life of the Mississippi coast region, and from October, 1936, through July, 1940, supervised the activities of a group employed on a joint Federal and State project sponsored by the State Game and Fish Commission. Collections made during this latter period are now deposited in the State Museum at Jackson.

In July, 1933, and again in April, 1938, E. A. McIlhenny was on the Mississippi coast, and articles appeared in *The Auk* (McIlhenny, 1933 and

1938) concerning his observations of the Barn Swallow and the Florida Crane.

Lawrence E. Hicks and Charles F. Walker were at Biloxi February 12-16, 1934, and published a list in *The Wilson Bulletin* (Hicks, 1934) of the birds observed in proximity to the coast between Bay St. Louis and Pascagoula.

Gordon Wilson (1935) was at Gulfport on December 22, 1934, and contributed a list of the birds observed there to the *Bird-Lore* Christmas Census.

In connection with his study of the Ivory-billed Woodpecker, John T. Tanner visited the Mississippi coast in August, 1938, and summarized his findings in a recent bulletin (1942).

Other ornithologists who have carried on field work on the Mississippi coast in recent years, but whose records have not been published, are: Ben B. Coffey, Jr., June and September, 1936, August, 1938, July, 1939, July, 1940, and October, 1941; George H. Lowery, Jr., September 11-13 and December 21, 1937, January 21 and March 12, 1939, February 4, 1940, May 7-8, 1942, and October 8, 1943; George M. Sutton, January and March, 1938, March, 1939, and May, 1942; Gregor G. Rohwer, February, 1940, through September, 1942; and Albert F. Ganier, October 8, 1943. Records of these ornithologists were utilized in the preparation of this report.

ACKNOWLEDGEMENTS

For the identification of recently described and difficult races, I wish to thank John W. Aldrich of the Fish and Wildlife Service, Alden H. Miller of the University of California, James L. Peters of Harvard University, and J. Van Tyne of the University of Michigan. For the loan of specimens for comparison I am indebted to the U. S. National Museum, the Chicago Natural History Museum, the Museum of Comparative Zoölogy, the University of Michigan Museum of Zoology and the American Museum of Natural History. I am especially indebted to Miss Fannye A. Cook of the Mississippi Game and Fish Commission for numerous courtesies extended, and for her generosity in placing at my disposal the collections that she made on the Mississippi coast and which are now deposited in the Game and Fish Commission Museum at Jackson. I wish also to thank George Miksch Sutton and Gregor G. Rohwer for the privilege of examining collections made by them on the Mississippi coast, and for their willingness to allow me to incorporate many of their records in this report. W. B. Bell and H. H. T. Jackson of the Fish and Wildlife Service by their

interest and cooperation made this study possible. To Captain and Mrs. John Grady of Biloxi I wish to express my appreciation for their cooperation in enabling me to use a boat at any time during the course of my field work. In this connection I am also indebted to the U. S. Coast Guard for courtesies extended. Ben B. Coffey was very helpful in locating obscure references. Dudley Heiliger kindly furnished records of interest from the United States Fish Hatchery at Lyman. Finally, I wish to acknowledge my indebtedness to George H. Lowery, Jr., for his invaluable cooperation in preparing this bulletin for publication, and for his counsel and advice on the many problems that developed from time to time. The large collection of birds from the Gulf coast and southern United States in the Louisiana State University Museum of Zoology proved to be indispensible and I am grateful to the authorities of that institution for free access to this material.

Systematic List[2]

In the annotated list that follows 350 species and subspecies of birds are recorded from the Mississippi Gulf coast. Of this number 85 are definitely known to breed; further study will doubtless add others to this category. Since sight records are too often open to question, especially where unusual species or abnormal dates are concerned, an attempt was made to verify all such occurrences by actual specimens. This eventually resulted in establishing a policy of collecting, where possible, at least one or two specimens of all species encountered in this circumscribed area. Most of these specimens are deposited in the collections of the Fish and Wildlife Service and the Louisiana State University Museum of Zoology. Where geographic races were involved small series were taken in order to determine the relative abundance of the various forms represented, and to gain some idea of actual dates of occurrence. Because of this policy 327 forms were represented by specimens at the conclusion of this study, and were available for critical examination. The few sight records included are largely concerned with such common and distinctive species as the Turkey Vulture and the Bald Eagle. The field identification of these birds, down to the species at least, could hardly be questioned. As a result of the collections made on the Mississippi coast, 3 new races were discovered (subspecies of *Hirundo rustica* and *Thryothorus ludovicianus*), and 53 forms added to the known avifauna of Mississippi. They are:

[2] The nomenclature employed in the systematic list follows the A. O. U. Check-List (4th ed.) and the 19th Supplement (1944). Recently described subspecies are included if their validity has been determined in the course of this study.

Gavia immer elasson
Dichromanassa r. rufescens
Haematopus p. palliatus
Charadrius melodus circumcinctus
Charadrius alexandrinus nivosus
Numenius a. americanus
Tringa solitaria cinnamomea
Limosa fedoa
Steganopus tricolor
Larus hyperboreus
Columbigallina passerina pallescens
Chordeiles minor howelli
Chordeiles minor aserriensis
Colaptes auratus borealis
Tyrannus verticalis
Empidonax traillii brewsteri
Pyrocephalus rubinus mexicanus
Troglodytes aëdon parkmanii
Troglodytes troglodytes pullus
Telmatodytes palustris thryophilus
Toxostoma rufum longicauda
Turdus migratorius propinquus
Turdus migratorius nigrideus
Hylocichla ustulata almae
Hylocichla minima bicknelli
Hylocichla fuscescens fuliginosa
Vireo b. bellii
Vireo solitarius alticola
Dendroica aestiva rubiginosa
Dendroica aestiva amnicola
Dendroica c. caerulescens
Dendroica townsendi
Dendroica tigrina
Seiurus aurocapillus furvior
Seiurus aurocapillus cinereus
Seiurus n. noveboracensis
Seiurus noveboracensis limnaeus
Geothlypis trichas occidentalis
Geothlypis trichas typhicola
Wilsonia pusilla pileolata
Setophaga ruticilla tricolora
Sturnella neglecta
Piranga ludoviciana
Passerina ciris pallidior
Passerculus sandwichensis mediogriseus
Ammodramus savannarum perpallidus
Pooecetes gramineus confinis
Pooecetes gramineus polius
Chondestes grammacus strigatus
Aimophilia aestivalis illinoensis
Spizella pallida
Zonotrichia querula
Melospiza melodia juddi

Family GAVIIDAE

GAVIA IMMER ELASSON BISHOP

LESSOR LOON

1938: 1 ♀, Horn Island, March 20.[3]

Throughout the winter months, and frequently until rather late in the spring, loons can be seen on the Mississippi Sound in small numbers. Normally single birds are observed, although on several occasions two birds have been found together. Extreme dates of occurrence are both for Deer Island, the earliest fall record being November 21 (1940), the latest record in the spring, May 27 (1939). The one specimen taken was found to be typical of this interior race, the wing measuring 338 mm.

[3] Records listed in small type at the beginning of the account of each species are of preserved specimens.

Family COLYMBIDAE

COLYMBUS AURITUS LINNAEUS
HORNED GREBE

1937: 1 ♀, Gulfport, January 3. 1941: 1 ♀, Gulfport, November 29.

The Horned Grebe was noted at rather infrequent intervals during the winter months, for it is apparently not a common bird on the Gulf coast. Extreme dates of occurrence are single birds seen at Gulfport, November 25 (1938), and at Deer Island, April 8 (1943). With one exception individuals seen were in full winter plumage. On April 1, 1938, one bird in partial spring plumage was observed near the west end of Ship Island.

PODILYMBUS PODICEPS PODICEPS LINNAEUS
PIED-BILLED GREBE

1938: 1 ♂, Bay St. Louis, March 15.

This little grebe was observed throughout the year, but was most numerous late in the fall and winter months when small flocks were seen frequently. It was found nesting at only one place, a shallow reed-fringed pond at the edge of Gulfport. However, the species would probably be more common as a breeding bird if conditions were more suitable. Unlike the preceding species, it showed an aversion to salt water; so I have only two records for Deer Island, where single birds were seen March 4, 1939, and November 13, 1942.

Family PELECANIDAE

PELECANUS ERYTHRORHYNCHOS GMELIN
WHITE PELICAN

Although not uncommon in Alabama, and plentiful during the winter months on the Louisiana coast, the White Pelican was, strangely enough, found to be extremely scarce in the Mississippi Sound. As conspicuous a bird as this can hardly be overlooked, yet in an interval of almost eight years it was noted but once. On October 20, 1940, a flock containing six individuals was seen in the harbor at Gulfport, resting on the water well out from the shore.

PELECANUS OCCIDENTALIS CAROLINENSIS GMELIN
EASTERN BROWN PELICAN

1935: 1 ♀, Deer Island, November 8.

There is no known instance of the Brown Pelican nesting on the Missis-

sippi coast; the closest breeding colonies are in the Chandeleur Islands, Louisiana. Non-breeding birds occur in limited numbers in the Mississippi Sound during the spring months; so this species can be considered resident there. An occasional bird is seen from late in February until the first of June. There is then a perceptible increase in numbers, and by the first of August, flocks of a hundred or more individuals can be observed. Similar flocks are present throughout the winter.

Family PHALACROCORACIDAE

PHALACROCORAX AURITUS AURITUS LESSON
DOUBLE-CRESTED CORMORANT

1938: 2 ♀, Biloxi, March 19 and 20. 1941: 1 ♀, Deer Island, October 5.

The cormorant is one of the commonest and most characteristic birds of the Mississippi Sound during the winter months, flocks of varying sizes being seen daily from late in September until early in May. Unlike other closely related species, no instance was observed of non-breeding birds lingering throughout the summer months; so there is an interval of almost five months when none were noted. The first fall birds appear regularly the last week in September, and within a week favorite pilings and old piers have their normal quota of cormorants. Late in March there is a noticeable decrease in numbers, but for another month an occasional bird can be seen. Extreme dates of occurrence are single birds noted on September 21 (1940) at Deer Island, and on May 10 (1942) at Cat Island. The few specimens taken are found referable to *auritus,* but further collecting should reveal the presence of other forms known to occur in adjoining states.

Family ANHINGIDAE

ANHINGA ANHINGA LEUCOGASTER (VIEILLOT)
WATER-TURKEY

1936: 1 ♂, Deer Island, July 31.

Although known to nest in the northern part of the State, the Water-Turkey apparently has no liking for salt water and is only of accidental occurrence on the coast. I have but two records, both for Deer Island, where single birds were seen in the wide stretch of open salt marsh on July 31, 1936, and on August 6, 1938.

Family FREGATIDAE

FREGATA MAGNIFICENS ROTHSCHILDI MATHEWS
MAN-O'-WAR-BIRD

1940: 1 ♂, Pass Christian, June 17.

Only during mid-summer does the Man-o'-war-bird occur in any appreciable numbers on the Mississippi coast, and even then it is necessary to be well offshore if one is to see this spectacular bird. At infrequent intervals strong winds from the south have driven small flocks to the mainland, when for a day or two they could be seen soaring low overhead close to the shore. One such storm resulted in my earliest record of this species. Twelve birds were seen at Gulfport on May 6, 1941, after three days of strong southeast wind. It is usually early in June before the first small flocks appear, but for three months then they can be found about the outer islands in varying numbers. Only once was this species recorded after the latter part of September, and in view of the number seen, this particular occurrence can be considered unusual in every respect. At noon on October 7, 1936, fully 500 of these birds appeared while I was on Deer Island, and for an hour or more circled and soared high overhead before finally disappearing to the east. The latest previous record is that of a single bird seen in the harbor at Gulfport on September 27, 1938.

Family ARDEIDAE

ARDEA HERODIAS HERODIAS LINNAEUS
GREAT BLUE HERON

1936: 1 ♀, Deer Island, September 22; 1 ♂, Deer Island, November 24.

Although the Great Blue Heron was noted in small numbers throughout the year, further collecting will be necessary to determine the relative abundance of this northern race during the winter months. Each fall, after the middle of November, a decided increase is noted in the numbers of the birds found in the stretches of salt marsh. It is probable that many of these individuals represent the race *herodias*.

ARDEA HERODIAS WARDI RIDGWAY
WARD HERON

This southern race of the Great Blue Heron breeds rather sparingly on the Mississippi coast. My few records consist of isolated nests found in the larger and more inaccessible swamps. Late in April an occasional bird

appears in the open salt marsh on Deer Island, and by early June it is always possible to find three or four birds there.

Butorides virescens virescens Linnaeus
Eastern Green Heron

1939: 1 ♀ im., Deer Island, June 28. 1940: 1 ♀, Deer Island, March 23. 1942: 1 ♀ im., Lyman, August 18. 1943: 1 ♂, Deer Island, March 19.

The Green Heron occurs as a fairly plentiful summer resident on the coast, usually appearing late in March and lingering in the fall until early in October. A characteristic nest, with five fresh eggs, was found on Deer Island on April 30, 1937. It was a compact yet rather flat platform of twigs and small sticks located 12 feet from the ground in the top of a pine sapling at the edge of a stretch of open salt marsh. Typical dates of arrival are March 24, 1936; March 23, 1940; March 16, 1942; and March 19, 1943; and for departure in the fall, September 27, 1940; and, October 8, 1941.

Florida caerulea Linnaeus
Little Blue Heron

1936: 1 ♂, Saucier, March 17. 1938: 1 ♀ im., Saucier, June 30; 1 ♂, Deer Island, July 20. 1941: 1 ♂, Deer Island, March 8. 1942: 1 ♂, Gulfport, March 4.

In the spring the Little Blue Heron occurs as a rather scarce and infrequent transient. With the exception of one year, my few records are during March when single birds were seen between the extreme dates of March 4 (1942) and March 23 (1940). In 1938, three birds in adult plumage were observed in the open salt marsh on Deer Island April 16, and a single adult April 30. By the last of June young birds of the year appear and can be seen almost daily for three months or more. Extreme dates of occurrence are June 26 (1941) and October 30 (1936).

Dichromanassa rufescens rufescens (Gmelin)
Reddish Egret

1938: 1 ♀, Deer Island, August 6. 1939: 1 ♂, Gulfport, September 29. 1940: 1 ♀, Gulfport, July 10.

Although this species has not heretofore been recorded from Mississippi, my observations indicate that it is a scarce but regular summer visitor on the coast. In addition to the specimens listed above, another individual was seen in the Gulfport harbor on September 14, 1940, and daily thereafter through October 6, when it was noted for the last time. The feeding habits of this heron are unlike those of any other of its family with which

I am familiar, for preference was consistently shown for the shallow waters of the Sound rather than the open marshes close by. Accompanied by terns, gulls, and flocks of shore birds, the Reddish Egret leads a rather active existence, energetically chasing the small fish that seemed to form the bulk of its food.

Casmerodius albus egretta (Gmelin)
American Egret

1936: 1 ♀, Gulfport, August 8; 1 ♀, Deer Island, September 30. 1938: 1 ♀, Saucier, August 16.

This conspicuous heron was rarely observed in the spring, but was common throughout the summer and fall months when it was seen almost daily from late July until early November. Extreme dates of occurrence in the spring are March 7 (1943) and April 11 (1938), and for the summer and fall months, July 22 (1937) and November 13 (1942). The only positive winter record is that of a single bird seen at Bay St. Louis on January 1, 1937. Birds noted on Cat Island on December 13, 1939, and on Deer Island on February 15, 1942, possibly may be considered wintering individuals.

Leucophoyx thula thula (Molina)
Snowy Egret

1937: 1 ♂, Deer Island, July 7. 1938: 1 ♂, Gulfport, July 27. 1939: 1 ♂, Deer Island, June 21. 1940: 1 ♂ im., Gulfport, July 7.

Since 1940 these egrets have appeared with regularity on the coast during the spring months, although previous to that year they were noted only in small numbers from late in June until early in November. Extreme dates in the spring are March 27 (1941) and May 10 (1942); whereas in the summer months single birds, rarely small flocks, were seen as early as June 21 (1939), and in the fall, as late as November 2 (1938).

Hydranassa tricolor ruficollis (Gosse)
Louisiana Heron

1938: 1 ♀ im., Deer Island, June 11. 1939: 1 ♀, Deer Island, June 28. 1940: 1 ♂, Gulfport, July 8. 1942: 1 ♂, Gulfport, August 18.

I found the Louisiana Heron to be rather scarce and of decidedly irregular occurrence in the spring, but fairly plentiful late in the summer and in fall. My few spring records are for single birds seen on Deer Island April 16, 1938, at Gulfport May 4, 1938, and on Deer Island

April 1, 1941. The first birds usually appear in the open marshes after the first week in June; however, it is early in July before many are seen. Then, for two months or more, an occasional bird can be observed almost daily, but after the middle of September relatively few are to be noted. Extreme dates of occurrence for the summer and fall months are May 30 (1936) and October 16 (1937). Arthur H. Howell (MS) found a colony of approximately 100 pairs of Louisiana Herons nesting on Petit Bois Island in 1913, but it is not known if this colony is still in existence.

Nyctanassa violacea violacea (Linnaeus)
Yellow-crowned Night Heron

1935: 1 ♂ im., Deer Island, July 24. 1936: 2 ♂ im., Deer Island, July 16; September 30. 1937: 1 ♀ im., Deer Island, June 30. 1938: 1 ♀, Horn Island, March 20; 1 ♀ im., Gulfport, May 9. 1939: 1 ♀ im., Deer Island, October 28. 1940: 1 ♂, Deer Island, March 23. 1942: 1 ♂, Deer Island, March 13.

In common with most of the other herons, this species was never found breeding on the Mississippi coast, although why this should be so is rather difficult to understand. A possible explanation is the fact that night herons are highly esteemed as food in htis section of the country. As a consequence the birds have been persecuted so severely that they have continued to nest in the more isolated marsh lands of Louisiana. In the spring small flocks appear with unfailing regularity about the middle of March but within a week or two they are gone. It is the end of June before the first birds, invariably young of the year, are seen in the marshes. They are soon plentiful, and remain so until the last of October. Extreme dates of occurrence in the spring are March 13 (1941 and 1942) and March 24 (1936), and for the summer and fall months, June 26 (1941) and November 13 (1937). I have two spring records for apparently non-breeding birds. On May 9, 1938, and again on April 28, 1943, single birds, still in immature plumage, were seen. My two winter records are of two birds, one an adult, noted in the wide stretch of open salt marsh on Deer Island on January 12, 1943, and again at this same place more than a month later, on February 20.

Ixobrychus exilis exilis (Gmelin)
Eastern Least Bittern

1936: 1 ♂, Bay St. Louis, July 11. 1941: 1 ♀ im., Biloxi, June 19. 1942: 1 ♀, Deer Island, March 13.

This diminutive heron is a common bird on the Mississippi coast during the summer months, and nests where there are suitable marshes. It was

noted at Bay St. Louis, Gulfport, Biloxi, Deer Island, and Pascagoula, and doubtless could be found in other marshes. A nest seen at Bay St. Louis on May 10, 1938, held three fresh eggs, and was well concealed in a thick clump of reeds in the middle of a wide stretch of open salt marsh. There are no records for the winter months; so the actual status of this species at this time of year is unknown. The specimen taken on Deer Island on March 13, 1942, was flushed from a thicket in the open pine woods, and apparently was a migrant. Otherwise all records are confined to the breeding season.

Botaurus lentiginosus (Montagu)
American Bittern

Despite its secretive nature, this bittern is too large to be easily overlooked; so my few records indicate that it is a rather scarce migrant on the coast. It was noted only in the spring. Single birds were seen on Deer Island on April 26, 1940, and at Gulfport on March 24, 1941, and March 20, 1943.

Family Threskiornithidae

Guara alba (Linnaeus)
White Ibis

1939: 2 ♀, Gulfport, March 12 (Cornell University collection). 1942: 1 ♀ im., Lyman, October 13.

At present the White Ibis is not known to breed on the Mississippi coast but it nests close by in Louisiana. It is a common bird during the spring months, and the flocks seen then are invariably flying from east to west. At no time were single birds seen; the flocks observed contained from ten to at times a hundred or more individuals. Such flocks are most numerous in late March and throughout most of April, although they were noted as early as March 7 (1943) and as late as May 10 (1941). Fall records are relatively few in number; the birds seen are largely dark-plumaged young of the year. Extreme dates are July 20 (1937) and October 13 (1942).

Plegadis sp.
Glossy Ibis

Only in 1940 was this bird observed; so it must be considered of accidental occurrence on the Mississippi coast. On September 28 four birds were seen at Gulfport flying low overhead. The following day two were found near this same spot with a flock of thirty White Ibises. On the basis of geographical probability, these birds were likely White-faced Glossy

Ibises (*Plegadis guarauna*). Since a specimen was not taken, however, there is no ground for positive specific identification.

Family ANATIDAE

CHEN CAERULESCENS (LINNAEUS)
BLUE GOOSE

1937: 1 ♂ im., Deer Island, October 16.

Except for a brief interval in the fall, and again in the spring, the Blue Goose is rarely seen on the Mississippi coast. Usually it is the latter part of October before the first flocks appear, flying high overhead, and within a few days the southward movement is apparently completely over. Weather conditions farther north appear to govern the actual route followed, for although these geese are abundant some years, there are other years when the main flight never appears in southern Mississippi. Early in February an occasional flock was noted flying north, but at no time did the numbers approach those observed in the fall. During the winter months, and on several occasions well into May, single birds were observed from time to time. These were seemingly merely stragglers from the main wintering grounds in southern Louisiana. Extreme dates of occurrence are October 16 (1937) and May 29 (1938).

CHEN HYPERBOREA (PALLAS)
LESSER SNOW GOOSE

Without exception these geese were seen with flocks of Blue Geese, but they were by no means as common. Usually there were from four to six Snow Geese in the flocks of fifty or more Blue Geese; the largest number noted at one time was twelve. There is apparently little tendency on the part of these birds to stray from their main winter grounds in southern Louisiana. Although it may be possible to see an occasional individual during the winter months, actual records are confined entirely to late fall and early spring. Extreme dates of occurrences are October 20 (1940) and February 13 (1941).

BRANTA CANADENSIS (LINNAEUS)
CANADA GOOSE

The Canada Goose occurs during the winter months about the outer islands, but is rarely seen on the mainland. It is usually possible to see one

or more flocks on the extreme western end of Cat Island. Local hunters have long recognized this fact and refer to this sandbar as "Goose Point." In the fall the first flocks appear in late October, whereas in the spring, stragglers have been noted as late as April 3 (1941).

Anas platyrhynchos platyrhynchos Linneaus
Common Mallard

1943: 1 ♂, Deer Island, March 8.

This familiar duck is a common bird throughout the winter months, appearing early in November and being noted in small flocks until the first of March. My extreme dates of occurrences are November 8 (1938) and March 8 (1943). A pair of these birds was seen on this latter date; the specimen taken was found dead at the edge of a small fresh water swamp in an emaciated condition resulting from an old wound.

Anas rubripes[4] Brewster
Black Duck

1941: 1 ♂ Handsboro, November 25 (collected by Gregor Rohwer).

This is one of the few ducks that shows partiality for salt water, for although frequently seen on the larger streams and bayous, small flocks were observed even more commonly feeding in the shallow waters of the Sound. Like the Mallard, the first flocks appeared in early November, and were noted almost daily until the middle of March. Extreme dates of occurrence are November 8 (1938) and March 26 (1938).

Anas discors Linnaeus
Blue-winged Teal

1937: 1 ♂, 1 ♀, Deer Island, April 10. 1939: 1 ♀, Deer Island, September 27. 1942: 1 ♀, 1 ♀ im., Deer Island, September 16.

The Blue-winged Teal was possibly the commonest duck occurring on the coast of Mississippi in migration. Flocks varying in size from four or five to thirty or more individuals were seen frequently, both in the spring and in the fall. They were most numerous the latter part of March and the first half of April, and again the last of September and early in October, at which times flocks were observed almost daily. Extreme dates of occurrence in the spring are March 11 (1940) and May 14 (1940), and in the fall, September 1 (1944) (Dudley B. Heiliger) and November 10

[4] For use of binomial instead of trinomial see Shortt (1943).

(1940). My one record for the winter months is that of a female seen on a pond at the edge of Gulfport on January 22, 1938.

Anas carolinensis Gmelin
Green-winged Teal

This species was noted at infrequent intervals in the late fall and early winter months. Extreme dates of occurrence (comprising almost without exception single birds) are November 20 (1940) and December 22 (1937).

Anas acuta tzitzihoa Vieillot
American Pintail

1936: 1 ♂ im., Bay St. Louis, December 4.

The Pintail was observed likewise at rather infrequent intervals on the coast, and apparently occurs in somewhat limited numbers throughout the late fall and winter months. Extreme dates of occurrence are October 28 (1942) and February 15 (1941).

Mareca americana (Gmelin)
Baldpate

I have only one record for the occurrence of the Baldpate; two birds were seen with other ducks on a pond at Gulfport on November 8, 1938.

Chaulelasmus streperus (Linnaeus)
Gadwall

This is another duck that apparently reaches the coast in extremely limited numbers. I recorded it but once; two birds were seen on a pond at Lyman on November 30, 1942. However, Gregor Rohwer has a male in his collection that he took at Handsboro on November 29, 1941.

Spatula clypeata (Linnaeus)
Shoveller

The one available record for this species is that of three birds seen on a pond at Gulfport on November 19, 1937, and daily thereafter through December 11.

Nyroca valisineria (Wilson)
Canvas-back

The Canvas-back was noted only in the fall, small flocks being seen at infrequent intervals during the last of October and throughout November.

Extreme dates of occurrence are October 28 (1942) and November 23 (1937). The one specimen taken is a female collected by Gregor Rohwer at Handsboro on November 20, 1942.

Nyroca americana (Eyton)
Redhead

Only on a few occasions each fall and winter was the Redhead seen, and then usually a single bird was found feeding with other ducks on a pond or bayou. The largest flock noted consisted of four birds, three of them males, seen at Gulfport on November 10, 1937. November and March were the two months when this species was most frequently observed. Extreme dates of occurrence are October 18 (1941) and March 10 (1939).

Nyroca collaris (Donovan)
Ring-necked Duck

My few definite records for this species are during November, although this duck possibly occurs in small numbers throughout the winter months. The earliest record is that of a flock of four birds seen at Gulfport on November 9, 1938. A female in the collection of Gregor Rohwer was taken at Handsboro on November 11, 1941.

Nyroca marila nearctica (Stejneger)
Greater Scaup Duck

I did not record this species on the Mississippi coast, and know of but one specimen taken there. In the study collections of the Mississippi Game and Fish Commission, at Jackson, there is a female specimen taken at Gulfport on May 24, 1940.

Nyroca affinis (Eyton)
Lesser Scaup Duck

The Lesser Scaup was by far the most abundant of the ducks occurring on the coast during the winter months. The numerous flocks seen then were found both on the larger fresh water ponds and bayous on the mainland and on the shallow waters of Mississippi Sound. Early in November the first flocks appeared with unfailing regularity and could be seen almost daily thereafter. Of decided interest was the late date to which these birds lingered in the spring. If only an occasional individual had been noted, it might have been considered a wounded bird that had not recovered

sufficiently in time to make the long flight northward. But a flock of twenty Lesser Scaups observed at Gulfport on May 19, 1939, and other flocks almost as large recorded on even later dates during other years eliminated this possibility. Therefore, the departure for the breeding grounds appears to be delayed until late in the spring when the flight northward is made with a minimum of time. The earliest date of arrival in the fall is November 8 (1938), and of departure in the spring, May 29 (1938).

Glaucionetta clangula americana (Bonaparte)
American Golden-eye

Although noted each winter, the Golden-eye was never seen in large numbers. Single birds were usually observed at infrequent intervals in the Mississippi Sound. It was early in December before the first birds appeared, and only on a few occasions was this species recorded after the middle of March. Extreme dates of occurrence are December 1 (1938) and May 3 (1938).

Charitonetta albeola (Linnaeus)
Buffle-head

This handsome little duck was rarely observed and apparently winters in extremely small numbers on the Mississippi Gulf coast. My two records are of single birds, both females, seen at Gulfport December 26, 1937, and November 25, 1938. There are two specimens in the Gregor Rohwer collection taken at Handsboro in 1941, a female on November 13, and a male on November 30.

Clangula hyemalis (Linnaeus)
Old-squaw

1936: 1 ♀, Deer Island, May 29. **1937**: 1 ♀, Deer Island, April 30. **1940**: 1 ♀, Handsboro, December 17 (Gregor Rohwer collection).

In addition to the specimens listed above I have two other records for the occurrence of the Old-squaw on the Mississippi coast. On January 19, 1938, a female was seen on a pond at Gulfport. Again, on March 26, 1942, a flock of nine of these birds, three of them adult males, was found feeding in the shallow waters of the Mississippi Sound, 3 miles west of Biloxi. This hardy duck long has been considered extremely uncommon this far south, but it appears now that the species is at least of casual occurrence on the Gulf coast during the late winter and spring months.

ERISMATURA JAMAICENSIS RUBIDA (WILSON)
RUDDY DUCK

Although never noted in appreciable numbers, the Ruddy Duck occurs regularly on the Gulf coast during the winter months when small flocks are seen on the larger ponds and on the bayous. They appeared each year early in November. In the spring it was the middle of April before any perceptible decrease in numbers was observed. The earliest date of arrival in the fall is November 8 (1938), and for departure in the spring, May 3 (1938).

MERGUS SERRATOR LINNAEUS
RED-BREASTED MERGANSER

1937: 1 ♀, Gulfport, February 16. 1938: 1 ♂ subad., Deer Island, March 26; 1 ♀ subad., Gulfport, July 5.

Because of the presence of non-breeding birds in the shallow waters of the Mississippi Sound throughout the summer months, the Red-breasted Merganser is the only duck that was observed during every month of the year. From the middle of April until late in November only one or two individuals were noted in the course of a day. When observed at close range they were invariably found to be in the first year plumage. After the first of December flocks varying in size from ten to twenty or more individuals were frequently seen. For an interval of four months the species was an abundant bird on the Mississippi Gulf coast.

Family CATHARTIDAE

CORAGYPS ATRATUS (BECHSTEIN)
BLACK VULTURE

1936: 1 ♂, Saucier, July 2. 1939: 1 ♂, Saucier, December 21. 1940: 1 ♀, Saucier, November 26.

Although a common bird on the mainland, and one which was seen daily, the Black Vulture was never noted on the islands. There is apparently no tendency on the part of these birds to go far from their accustomed haunts regardless of the season of the year. The extreme western end of Deer Island lies less than a mile offshore, yet not once was a Black Vulture observed there. It appears safe to say that this species is possibly the least migratory of any bird found throughout the year on the mainland.

CATHARTES AURA (LINNAEUS)
TURKEY VULTURE

The Turkey Vulture is a far less common bird here than the preceding species. Usually one or two can be seen soaring high overhead or feeding on carrion with ten or twelve Black Vultures, where, although outnumbered about five to one, each manages to procure an ample meal. It is well known that these birds are migratory in the northern part of their range, a fact that probably accounts for their appearance in small numbers on Deer Island during the fall months. Although not noted at any other time of the year, they were seen at infrequent intervals from the latter part of September until the end of November. Extreme dates of occurrence on the island are September 21 (1940) and November 26 (1941). The lack of specimens makes it impossible to determine which race or races are represented by both breeding and migrant populations.

Family ACCIPITRIDAE

ELANOIDES FORFICATUS FORFICATUS (LINNAEUS)
SWALLOW-TAILED KITE

This spectacular bird is said to breed sparingly in the more inaccessible swamps, but to my knowledge no nest actually has been found. I noted it but once, a single bird seen on May 19, 1941, soaring low over a stretch of thick swamp woodland near Pearlington. A female was collected by Gregor Rohwer at Handsboro on April 21, 1940.

ICTINIA MISISIPPIENSIS (WILSON)
MISSISSIPPI KITE

1935: 1 ♂, Saucier, August 14. 1938: 1 ♂, Saucier, July 7. 1941: 1 ♂, Gulfport, June 29.

Although conspicuously absent in the spring, the Mississippi Kite proved to be a regular and fairly common fall transient. It usually appears during early July in thick woods bordering the streams and is frequently seen then until the latter part of August. Since it is the last of May before nesting activities are well underway farther north, it appears, on the basis of the few specimens taken, that the adult males frequently leave their breeding haunts as soon as the young are on the wing. I never observed this species in flocks; one or two birds were invariably seen soaring low overhead. Extreme dates of occurrence are June 29 (1941) and August 27 (1938).

Accipiter cooperii (Bonaparte)
Cooper Hawk

1935: 1 ♂, Pass Christian, April 24. 1937: 1 ♀, Gulfport, December 11.

Despite the late dates on which this species is occasionally seen in the spring, it was not found nesting and apparently occurs merely as an uncommon winter resident on the Mississippi Gulf coast. An occasional bird can be found between September and April in the stretches of woods bordering the streams. A distinct migration of these hawks was observed on Deer Island on October 7, 1941, when in the course of an hour, eight flew by low overhead. All appeared from the eastern end of the island and after reaching the extreme western end, they proceeded on across the open water to the mainland. My earliest date of arrival in the fall is September 19 (1941), and for departure in the spring, April 24 (1935).

Accipiter striatus velox (Wilson)
Sharp-shinned Hawk

1936: 1 ♂, Gulfport, November 29. 1939: 1 ♂, Gulfport, October 29; 1 ♂, Deer Island, November 4. 1940: 1 ♂, Gulfport, April 21. 1941: 1 ♂, Deer Island, March 26. 1942: 1 ♂, Gulfport, December 21.

This little hawk occurs in rather limited numbers during the winter months when an occasional bird is seen in woods bordering the streams. The first individuals usually appear early in November and it is rather exceptional to observe one after the end of March. Available records show that at no time have they been present in considerable numbers, nor has any particular month been characterized by exceptional abundance. Extreme dates of occurence are October 29 (1939) and April 21 (1940).

Buteo jamaicensis borealis (Gmelin)
Eastern Red-tailed Hawk

1941: 1 ♂, Saucier, December 7. 1943: 1 ♀, Lyman, December 30.

The Red-tailed Hawk is one of the least common of the birds of prey occurring on the Gulf coast during the winter months. The species is rarely seen before the middle of November and it is usually in December and January that one or two are noted in the open pine woods. The earliest date of arrival in the fall is November 1, 1937, when one bird was seen on Deer Island. In the spring an occasional bird will linger until April; the latest date of departure is April 20 (1936). The two specimens taken were found to be typical of the eastern race, *borealis*.

Buteo lineatus lineatus (Gmelin)
Northern Red-shouldered Hawk

1936: 1 ♂, Saucier, December 22. 1939: 1 ♀, Gulfport, September 15. 1940: 1 ♀ im., Gulfport, November 10. 1941: 1 ♀, Saucier, January 14.

On the basis of actual specimens taken, the northern race of the Red-shouldered Hawk appears to be fairly common on the Mississippi coast during the winter months. One or two of these familiar hawks usually can be seen each day throughout the winter in woods bordering the streams on the mainland and not infrequently in the open pine woods. I have only three records for Deer Island, single birds seen December 31, 1937; October 12, 1940; and, October 21, 1941.

Buteo lineatus alleni Ridgway
Florida Red-shouldered Hawk

1936: 1 ♂, Saucier, July 10. 1941: 1 ♂, Lyman, January 24 (Gregor Rohwer). 1943: 1 ♂, Gulfport, January 11.

An occasional pair of these birds can be found nesting each year in the larger stretch of woods bordering the streams on the mainlnad; at infrequent intervals during the summer months one was seen in the open pine woods. A nest was found near Saucier on March 28, 1936, that apparently held eggs, but which was inaccessible, being 40 feet from the ground in the top of a large magnolia. Since specimens were taken in January it is probable that *alleni* is largely resident on the coast.

Buteo platypterus platypterus (Vieillot)
Broad-winged Hawk

1936: 1 ♂, Gulfport, April 4. 1937: 1 ♀, Woolmarket, July 22. 1938: 1 ♂ im., Saucier, July 18. 1941: 1 ♂, Biloxi, May 24.

Although I never found a nest, there is little doubt that this species breeds at least sparingly on the Mississippi Gulf coast. It was noted infrequently in certain stretches of woods each summer, a fact that makes me reasonably certain of its status as a breeding bird. The first individuals do not usually appear in the spring until early April. My earliest record is March 31 (1938). Departure in the fall is apparently rather early for I never noticed the species later than early September.

Aquila chrysaëtos canadensis (Linnaeus)
Golden Eagle

I saw this species on only one occasion in southern Mississippi. On November 10, 1942, and for eight days thereafter, one bird was observed

almost daily at the Fish Hatchery near Lyman, preying on the Coots that were numerous at that time. It fortunately was not very wary and could be approached sufficently close to permit accurate identification. From time to time reports reached me of large eagles carrying off small lambs and pigs while the latter fed in the open pine woods. Since the description of these birds invariably suggested the Golden Eagle, it appears that this species is possibly of at least casual occurrence during the winter months.

Haliaeetus leucocephalus leucocephalus (Linnaeus)
Southern Bald Eagle

The Bald Eagle is known to nest each year on Cat Island and on Ship Island, and it is possible that it nests on the other islands as well. Apparently it rarely comes to the mainland, having been observed there on only few occasions. It is equally uncommon on Deer Island. The few records at that locality are of adult birds seen September 22, 1936; February 22, 1937; October 21, 1941; and, November 3, 1942. A nest found on Ship Island on April 10, 1940, seemingly held small young, for while neither of the parents was incubating, both were present and very much disturbed by my presence on the island. The nest was the usual bulky structure and was 50 feet from the ground in the top of one of the largest pines.

Circus cyaneus hudsonius (Linnaeus)
Marsh Hawk

1936: 1 ♀ im., Deer Island, September 22.

The Marsh Hawk is a common bird during the winter months and is seen almost daily both on the mainland and on the islands. It is usually the middle of September before the first bird is noted in the fall; on only very few occasions did one linger later than the middle of April. My extreme dates of occurrence are September 1 (1938) and May 10 (1941). The scarcity of adult male Marsh Hawks was very noticeable on the Mississippi Gulf coast; more often than not an entire winter passes without one being observed.

Family Pandionidae

Pandion haliaetus carolinensis (Gmelin)
American Osprey

1936: 1 ♂, Deer Island, October 7. 1943: 1 ♀, Lyman, February 27.

The familiar "fish hawk" nests on all the outer islands, but, in my experience, nowhere on the mainland. Even on Deer Island it is merely of

casual occurrence during the breeding season, although there is no obvious reason why it should not nest there. Very few of these birds remain during the winter months but by the middle of March there is a pronounced northward movement. From then until the first week of November the Osprey is a conspicuous feature of the landscape of the islands. Arrival and departure dates are somewhat complicated by the possibility of wintering birds, but I consider March 10 as the average date of arrival, and November 5 as the average date of departure. A bird seen on Deer Island on December 21 (1940) is my one definite winter record, although others noted on Cat Island on February 24 (1937), and at Lyman on February 27 (1943) were suspected of having wintered on the Mississippi Gulf coast.

Family FALCONIDAE

FALCO PEREGRINUS ANATUM BONAPARTE
DUCK HAWK

Although rarely seen on the mainland, the Duck Hawk can be found during the winter months on all the islands. I noted it then on practically every occasion when I was on Deer Island, and likewise saw it on my infrequent trips to Cat Island and to Horn Island. Usually only a single bird was seen; the largest number observed in the course of a day was three, on Deer Island on October 7, 1941. The Laughing Gull and the Ring-billed Gull appear to suffer most so far as this hawk's food supply is concerned, although I frequently saw the larger shore birds seized and carried off to be eaten. It is usually the middle of September, seldom later, when these large falcons appear in the fall, and the middle of May before the last one is recorded in the spring. My extreme dates of occurrence are September 13 (1940) (Cat Island), and May 19 (1939) (Gulfport).

FALCO COLUMBARIUS COLUMBARIUS LINNAEUS
EASTERN PIGEON HAWK

1936: 1 ♀, Saucier, October 15. 1937: 1 ♀, Deer Island, September 11. 1939: 1 ♀, Cat Island, September 21.

Unlike the Duck Hawk, this species is largely a transient on the Mississippi coast; although frequently observed both in the fall and in the spring, it is rarely noted during the winter months. Late in September and early in October, and again early in May the species is most numerous; at that time several can be seen almost daily on the islands. Only rarely has it been found on the mainland. My two records for the winter months are single birds seen on Petit Bois Island on December 21, 1937, and on

Deer Island on December 21, 1940. My earliest record for the fall migration is September 11 (1937); my latest in the spring, May 10 (1942).

Falco sparverius sparverius Linnaeus
Eastern Sparrow Hawk

1935: 1 ♀, Saucier, December 3; 1 ♀, Deer Island, December 4. 1937: 1 ♂, 1 ♀, Saucier, January 7 and December 9. 1938: 1 ♀, Deer Island, October 29. 1941: 1 ♂ im., Deer Island, November 4. 1943: 1 ♂, Gulfport, January 19.

This northern race of the Sparrow Hawk is common during the winter months on the Mississippi coast and is generally distributed through the wide stretches of open pine woods both on the mainland and on the islands. Lack of actual specimens taken early in the fall makes it impracticable to give arrival dates, but a perceptible increase in the numbers of these birds seen after the middle of September indicates the presence of migrants from the north at that time. A similar uncertainty exists concerning dates of departure in the spring, although single birds were noted on Deer Island (where this species does not breed) as late as March 7 (1942) and March 14 (1943). These may have been individuals referable to the northern race.

Falco sparverius paulus (Howe and King)
Little Sparrow Hawk

1935: 1 ♂, Deer Island, August 2. 1938: 1 ♀, Saucier, June 23; 1 ♂ im., Saucier, August 15. 1939: 1 ♂, Saucier, October 4.

As a breeding bird the Sparrow Hawk is rather scarce in the extreme southern edge of the State and is found in only a few places. Abandoned Flicker holes are utilized as nesting sites. Since the few that I found were high above the ground in rotten snags, and therefore inaccessible, I have no positive breeding records. However, three fully grown young of the year seen with their parents near Saucier on August 15, 1938, is evidence of the breeding status of this species in this region. In view of the difference of opinion that exists concerning the range of this small race of the Sparrow Hawk north of the Florida Peninsula, it is of interest to note that the specimens listed above are clearly referable to *paulus*. The wings of the males average 65.7 mm. in length, and the wing of the one female measures 75 mm. In comparison, the wing length of the northern males taken on the coast average 83 mm., that of the females, 89.5 mm. No records are available for the southern race for the winter months, although further collecting possibly might reveal its presence at that season of the year.

Family PHASIANIDAE

COLINUS VIRGINIANUS VIRGINIANUS (LINNAEUS)
EASTERN BOBWHITE

1936: 1 ♂, Saucier, July 29.

This popular game bird was found to be one of the characteristic birds of the open pine woods and was seen almost daily. During the fall and winter months it was always possible to flush two or three coveys in the course of a morning spent in the field.

Family MELEAGRIDIDAE

MELEAGRIS GALLOPAVO SILVESTRIS VIEILLOT
EASTERN WILD TURKEY

Once fairly common and generally distributed through this region, the Wild Turkey has in recent years largely disappeared from the wooded swamps where it originally occurred. It can still be found in small numbers along the Pascagoula River, but to my knowledge nowhere else along the coast.

Family GRUIDAE

GRUS CANADENSIS PRATENSIS MEYER
FLORIDA SANDHILL CRANE

In a limited area a few miles west of Pascagoula the Sandhill Crane can be found nesting in small numbers each year, but it is not known to occur elsewhere on the coast.

GRUS AMERICANA (LINNAEUS)
WHOOPING CRANE

The one record for the Mississippi coast is based on the statement by Wells W. Cooke (1914) that a Whooping Crane was seen at Bay St. Louis on April 15, 1902.

Family RALLIDAE

RALLUS LONGIROSTRIS SATURATUS RIDGWAY
LOUISIANA CLAPPER RAIL

1935: 1 ♂, Deer Island, August 16. 1936: 1 ♂, Bay St. Louis, March 3; 1 ♂, Deer Island, July 31. 1938: 1 ♂, Cat Island, January 15. 1942: 1 ♂, Bay St. Louis, February 16. 1943: 1 ♀, Deer Island, April 16.

It is doubtful if there are any areas of salt marsh on the coast where the Clapper Rail cannot be found throughout the year. Secretive by nature,

these birds are more often heard than seen, although it is not difficult to flush an occasional individual when the observer is wading the marshes. They are equally common both on the mainland and on all the islands. All the specimens taken are typical of *saturatus*.

Rallus elegans Audubon
King Rail

1938: 1 ♂, Gulfport, September 30.

The specimen listed above, found in a small fresh water marsh at the edge of Gulfport, is my only record for the occurrence of this species. It is probably more common than my limited experience indicates.

Rallus limicola limicola Vieillot
Virginia Rail

My one record for the occurrence of this species on the coast is that of a single bird seen on Deer Island on March 8, 1943. It flushed from almost underfoot as I was crossing a stretch of salt marsh, dropped to the ground after flying a short distance, and then could not be found again despite a diligent search.

Porzana carolina (Linnaeus)
Sora

1936: 1 ♀, Gulfport, September 29. 1937: 1 ♂, Gulfport, December 22. 1940: 1 ♀, Gulfport, April 29. 1942: 1 ♂, Gulfport, May 6.

Although infrequently seen, the Sora is probably a fairly common winter resident on the Mississippi Gulf coast. After the latter part of September, and until the following May, I noted an occasional bird in the open marshes both on the mainland and on the islands, and in view of the difficulty of flushing them from the thick marsh grass, I undoubtedly saw few of those actually present. In an open marsh 10 miles north of Gulfport I found these rails present each year during the first week in May and suspected that they actually might be breeding there but this was not verified. So far as the stretches of salt marsh on the coast are concerned, my extreme dates of occurrence are Septeember 29 (1936) and May 1 (1943) (Deer Island).

Coturnicops noveboracensis noveboracensis (Gmelin)
Yellow Rail

I was never fortunate enough to encounter this elusive species on the Mississippi Gulf coast, and know of but two records. Cooke (1914, p. 32)

cites a single record by Allison who listed the Yellow Rail at Bay St. Louis on April 21, 1902. Hicks (1934) while on the Mississippi coast from February 12-16, 1934, noted two birds.

Gallinula chloropus cachinnans Bangs
Florida Gallinule

1937: 1 ♀ im., Gulfport, August 6; 1 ♀, Gulfport, December 22. 1940: 1 ♂, Gulfport, May 15.

The Florida Gallinule apparently has no liking for salt water, for although fairly common throughout the year on the mainland in the open fresh water marshes, it was never noted in the wide stretches of salt marsh, either on the coast or on the islands. During the summer months single birds were frequently seen feeding at the edges of the pools where they permitted a fairly close approach before disappearing in the reeds or thick marsh grass. Late in the fall and in winter a tendency of these birds to associate in small flocks was noted and on more than one occasion I observed as many as ten of them together.

Porphyrula martinica (Linnaeus)
Purple Gallinule

1940: 1 ♀, Bay St. Louis, May 4.

In addition to the specimen listed above I have only two records for the occurrence of this species on the coast; therefore it seemingly nests here in extremely limited numbers. On June 26, 1937, and again on May 4, 1940, single birds were seen in small fresh water marshes near Gulfport.

Fulica americana americana Gmelin
American Coot

1937: 1 ♂, Gulfport, December 10. 1940: 1 ♂, Gulfport, June 16. 1942: 1 ♀, Lyman, October 28.

Probably no other species on the Mississippi Gulf coast exceeds the Coot so far as actual numbers during the winter are concerned. From late in October until April, flocks of sixty to a hundred or more of these birds can be seen on the larger ponds and bayous. Rarely such flocks were observed in the shallow waters of the Mississippi Sound, although as a rule salt water is avoided. The largest number noted at one time was on October 24, 1938, when fully 800 were seen on a pond at Gulfport. Although seen in limited numbers during the summer months, it was found nesting at only one place, a large shallow pond at the edge

of Gulfport that is bordered by a narrow stretch of reeds and marsh grass. Here on July 20, 1937, four newly hatched young were seen with their parents, feeding in the reeds near the shore.

Family HAEMATOPODIDAE

HAEMATOPUS PALLIATUS PALLIATUS TEMMINCK
AMERICAN OYSTER CATCHER

1941: 1 ♀, Deer Island, September 25.

Despite the fact that it nests on the islands off the Louisiana coast, the Oyster Catcher is apparently of merely accidental occurrence in Mississippi. The female taken on Deer Island is the only record for this species on the Mississippi coast, and, as far as I am aware, the first for the State.

Family CHARADRIIDAE

SQUATAROLA SQUATAROLA (LINNAEUS)
BLACK-BELLIED PLOVER

1935: 2 ♂, 2 ♀, Deer Island, July 24, August 23, October 12. 1936: 1 ♂, 1 ♀, Gulfport, March 27, December 16. 1937: 1 ♂, Gulfport, August 17. 1938: 1 ♂, Deer Island, June 11. 1939: 1 ♀, Gulfport, May 23. 1940: 2 ♂, Deer Island, June 18, October 12. 1941: 1 ♂, Deer Island, May 21.

This plover is the one shore bird that never failed to be present every month of the year on the beaches and sandbars of the Mississippi Sound. Late in May and in June when sandpipers and other plover are rarely seen, small flocks of Black-bellied Plover can be found on the islands and on the mainland. It is not uncommon then to record as many as a dozen birds in the course of a day. All are invariably in the drab winter plumage, and are apparently non-breeding birds that had no incentive to go north with the rest of their kin. By the first of August, adults in breeding plumage begin to appear in increasing numbers and flocks of 10 to 20 of these large plovers are soon a common sight on the beaches. They are almost as numerous during the winter months; so whether it be June or January it is always possible to see flocks of Black-bellied Plovers on the Mississippi coast.

PLUVIALIS DOMINICA DOMINICA (P. L. S. MÜLLER)
AMERICAN GOLDEN PLOVER

1939: 1 ♂, Deer Island, October 13; 1 ♀, Deer Island, November 11; 1 ♂, Gulfport, December 18. 1940: 1 ♂, Gulfport, February 14; 1 ♂, Gulfport, December 1.

On the basis of available records it appears that a few Golden Plovers

arrive on the Mississippi Gulf coast in the fall and remain on certain favored beaches until the following spring. This is far north of previously stated limits of the winter range of the species, but since specimens taken showed no signs of injury or abnormalities of any kind, the Golden Plover must be considered of at least casual occurrence on the Mississippi Gulf coast during the winter months. Departure in the spring is rather early; the latest records are of single birds seen on Deer Island on March 26, 1941, and on April 5, 1943.

Charadrius hiaticula semipalmatus Bonaparte
Semipalmated Plover

1935: 1 ♂, Deer Island, October 21. 1936: 1 ♀, Gulfport, November 19. 1937: 1 ♂, 1 ♀, Gulfport, July 20, December 10. 1938: 1 ♀, Gulfport, May 31; 1 ♂, Deer Island, June 21. 1939: 2 ♀, Deer Island, May 20, October 7; 2 ♂, Gulfport, June 19. 1940: 1 ♂, 2 ♀, Gulfport, May 24, July 11, November 20; 2 ♂, Deer Island, June 18, September 6. 1941: 3 ♀, Gulfport, February 20, July 22; 1 ♂, Deer Island, October 5. 1942: 1 ♂, Deer Island, February 15.

Although recorded every month of the year on the coast there is a brief interval early in summer when the Semipalmated Plover is absent from the beaches. It was seen on Deer Island as late in the spring as June 21 (1938), and on its return from its northern breeding grounds as early as July 11 (1940). Normally, however, none are observed from the middle of June until the latter part of July. It is possibly most abundant in August and September, and again late in April and in May, when scattered small flocks can be seen on the stretches of open beach. Comparatively few remain during the winter months; only at infrequent intervals was it noted after the end of November. A decidedly unusual occurrence was the presence of a flock of 15 of these birds at Gulfport on December 22, 1937.

Charadrius melodus melodus Ord
Eastern Piping Plover

1938: 1 ♂, Gulfport, September 2.

The specimen listed above is the only record for the occurrence of the eastern race of the Piping Plover on the Mississippi Gulf coast.

Charadrius melodus circumcinctus Ridgway
Belted Piping Plover

1935: 1 ♀, Gulfport, December 27. 1936: 2 ♂, Gulfport, September 14, December 6; 1 ♀, Deer Island, August 13. 1937: 1 ♂, Bay St. Louis, January 1; 1 ♂, 1 ♀, Deer Island, July 31, August 28. 1938: 3 ♂, 2 ♀, Gulfport, August

1 and 26, October 18, December 2; 1 ♀, Deer Island, August 2. 1939: 1 ♂, 1 ♀, Deer Island, January 31; 1 ♂, Gulfport, November 16. 1940: 1 ♂, 1 ♀, Cat Island, May 5, October 23; 1 ♂, 1 ♀, Gulfport, July 26, November 1; 2 ♀, Deer Island, November 5, December 21. 1941: 2 ♂, 1 ♀, Deer Island, July 21, October 5, December 13; 2 ♀, Gulfport, September 23, December 22. 1942: 1 ♀, Deer Island, February 15. 1943: 1 ♂, Deer Island, May 1.

A critical comparison of this series of 29 specimens with a similar series from the Atlantic coast revealed characters that readily separate this interior race from typical *melodus*. In birds that have acquired the breeding plumage, *circumcinctus* can easily be recognized by its broad, continuously black jugular band which in *melodus* is narrower and broken in the middle. Winter specimens are more difficult to separate, but nevertheless distinct enough. In *circumcinctus* there is always a brownish band across the breast, usually interrupted, but never inconspicuous, and more intensely brown patch on either side of the lower neck. In *melodus* these characters are rather obscure and frequently wanting. No measurement differences were noted that separate the two races. (*Cf.*, Moser, 1942).

This race of the Piping Plover is a fairly common winter resident on the Mississippi coast, scattered small flocks being frequently seen at that time on the stretches of open beach. For an interval of almost three months, from early in May until the end of July, none were noted. However, during the remainder of the year single birds or small flocks are of common occurrence, feeding alone or in company with other shore birds. Extreme dates of occurrence are July 21 (1941) and May 9 (1939).

Charadrius alexandrinus nivosus (Cassin)
Western Snowy Plover

1936: 1 ♀, Gulfport, November 15. 1939: 1 ♀, Deer Island, October 21. 1940: 1 ♂, Deer Island, October 5.

This western race of the Snowy Plover has not been recorded heretofore in the eastern United States, but appears now to be of at least casual occurrence on the Gulf coast. The specimens listed above, typical of *nivosus* in every respect, constitute all the records to date, but further study should reveal the presence of this race during the winter months.

Charadrius alexandrinus tenuirostris (Lawrence)
Cuban Snowy Plover

1935: 1 ♂, 1 ♀, Deer Island, August 23, September 28. 1936: 2 ♂, 1 ♀, Deer Island, June 21, November 24, December 26. 1937: 1 ♂, Deer Island, February 22; 1 ♂, Ship Island, May 30. 1938: 2 ♂, 1 ♀, Gulfport, July 5,

November 4, December 2. 1939: 1 ♀, Deer Island, October 21. 1940: 1 ♂, 1 ♀, Deer Island, October 5, November 5. 1941: 1 ♂ im., Gulfport, July 1. 1942: 1 ♂ im., 1 ♀, Deer Island, August 20, October 31.

So far as my experience goes the Snowy Plover breeds very sparingly on the Mississippi coast. I noted it as a breeding bird only on Ship Island, but it was recorded by Arthur H. Howell (MS) as nesting in small numbers on Horn Island and Petit Bois Island. At Gulfport and on Deer Island, where it is not known to nest, an occasional bird appears the latter part of June or early in July. From then until the following February single birds or small flocks were seen at infrequent intervals. It is most numerous in November and the first half of December, and the small flocks found on the open beaches at that time are doubtless from the northern breeding range of this species in Kansas and Oklahoma. I have no records for the spring months other than on Ship Island. Extreme dates of occurrence on Deer Island, where only transients were noted, are June 21 (1936) and February 22 (1937).

CHARADRIUS VOCIFERUS VOCIFERUS LINNAEUS

KILLDEER

1935: 1 ♀, Deer Island, December 30. 1937: 1 ♂ im., 1 ♀ im., Gulfport, July 1, August 18. 1940: 2 ♀, Deer Island, January 13, October 19; 1 ♂ im., Biloxi, June 29. 1943: 1 ♀, Deer Island, April 24; 1 nestling ♂, Deer Island, May 8.

The Killdeer is not a very common bird on the coast during the breeding season, and even then is rather local in its distribution. This is probably attributable to the lack of large upland open areas suitable for nesting sites. The southern edge of the State is characterized by wide stretches of pine woods, with open fields and pastures few and far between. It is doubtful if more than half a dozen pairs nest in this region each year. During the past year (1943), it was found nesting for the first time away from the mainland, a pair of birds rearing a brood of young at the extreme western end of Deer Island. The presence of the two adults late in April caused me to suspect that they were actually nesting on the island, and on May 8 I succeeded in finding their newly hatched young scattered along a stretch of open beach. Early in November flocks of migrants from the north appear, after which the Killdeer can be found throughout the winter in flocks of varying size on many of the beaches, both on the mainland and on the islands.

Charadrius wilsonia wilsonia Ord
Wilson Plover

1935: 1 ♂, 1 ♀, Deer Island, July 24, September 2. 1936: 1 ♂, 1 ♀, Deer Island, March 24, August 13. 1937: 1 ♀, Deer Island, August 13. 1938: 1 ♂, Gulfport, June 28. 1939: 1 ♂, Deer Island, March 10. 1940: 1 nestling ♂, Deer Island, July 4; 1 ♀, Gulfport, September 8. 1941: 1 ♀, Deer Island, March 8.

The Wilson Plover is a common and characteristic bird of the Mississppi Gulf coast during the summer months when scattered pairs are found nesting on many of the stretches of open beach. Not until the middle of March do the first individuals appear in the spring, but within a week these plovers are plentiful. Late in September there is a perceptible decrease in the number of small flocks observed; only rarely is this species noted after the first week of October. There are no records for the winter months. Extreme dates of occurrence are March 8 (1941) and October 16 (1937).

Bartramia longicauda (Bechstein)
Upland Plover

1938: 1 ♂, Gulfport, April 11.

This species is one of the scarcest of the shore birds occurring on the Mississippi Gulf coast, and was observed only at infrequent intervals during the spring. There have been years when none was seen; and usually only one small flock is recorded late in March or in April. Extreme dates of occurrence are March 16 (1940) (Deer Island) and April 29 (1943) (Gulfport).

Numenius phaeopus hudsonicus Latham
Hudsonian Curlew

1941: 1 ♀, Deer Island, May 21.

This is another shore bird that was observed only in the spring and then at infrequent intervals. The few records are from Deer Island where single birds or small flocks were seen feeding about the shallow pools in the wide stretch of open salt marsh in the middle of the island. Actual dates of occurrence are as follows: Seven birds seen on May 10, 1940; two on May 21 and three on June 7, 1941; five on May 8, 1942; one on April 12 and four on April 22, 1943.

Numenius americanus americanus Bechstein
Long-billed Curlew

1942: 1 ♂, Deer Island, August 15.

The specimen listed above is the only record for the occurrence of this species on the Mississippi coast. The measurements are: wing, 287 mm.;

tail, 110; culmen, 140; tarsus, 74. Since there is a certain overlap in size between the two recognized races, the identification of the specimen as *americanus* must be considered more or less arbitrary.

Limosa fedoa (Linnaeus)
Marbled Godwit

1936: 1 ♀, Gulfport, September 7. 1941: 1 ♂, Deer Island, October 5.

The above-listed specimens constitute the only records for the occurrence of the Marbled Godwit on the Mississippi Gulf coast. It has not been recorded heretofore from the State and must therefore be considered an extremely rare transient.

Totanus flavipes (Gmelin)
Lesser Yellowlegs

1938: 1 ♂, Deer Island, July 20. 1940: 1 ♂, Deer Island, May 18.

The Lesser Yellowlegs is a regular but not very common transient on the coast, small flocks being seen at infrequent intervals both in the spring and in the fall. It was not uncommon to find one or two of these birds feeding with other shore birds in the open marshes, but at no time were flocks comprising over ten individuals noted. This species was most frequently observed in April and again late in August and in September, although actually it was recorded during 8 months of the year. Extreme dates of occurrence for the spring migration are March 4 (1943) and May 22 (1944), and for the fall migration July 18 (1936) and November 19 (1937).

Totanus melanoleucus (Gmelin)
Greater Yellowlegs

1940: 1 ♀, Deer Island, March 16. 1942: 1 ♀, Deer Island, December 1.

The Greater Yellowlegs, like the preceding species, proved to be a regular but far from plentiful transient on the Mississippi coast. It was never seen in flocks, and only on one occasion was more than two individuals found together. This was on September 1, 1938 when three of these birds were noted on Deer Island feeding on a sandbar exposed by the low tide. In the spring an occasional bird was noted from early in March until the middle of May, and in the fall from early in July until the first week in November. Extreme dates of occurrence are March 8 (1941) and May 15 (1941), and July 6 (1940) and November 10 (1940). There are three records for the winter months, single birds

being seen on Deer Island on January 13, 1937, and December 1, 1942, and at Bay St. Louis on February 18, 1939.

Tringa solitaria solitaria Wilson
Eastern Solitary Sandpiper

1938: 1 ♂, Bay St. Louis, March 18; 2 ♀, Gulfport, May 11, July 15. 1939: 1 ♂, 1 ♀, Gulfport, May 12 and 17. 1940: 1 ♂, 1 ♀, Gulfport, March 18, September 20; 1 ♀, Saucier, April 24; 1 ♀, Cat Island, May 5. 1941: 4 ♂, 2 ♀, Gulfport, March 22, April 2 and 4, May 6, 9, and 14. 1942: 1 ♂, 1 ♀, Gulfport, March 10 and 25; 1 ♀, Cat Island, May 10. 1943: 1 ♂, Deer Island, April 16.

Although common in the spring and frequently seen from the middle of March until the middle of May, the Solitary Sandpiper was extremely scarce in the fall. Apparently its migration route at this season of the year is unlike that followed in the spring, for there were years when none was noted in the fall. Only in 1937, when three individuals were observed, was this species recorded more than once during any fall migration. An interesting fact noticed each year was the aversion these birds apparently have for salt water environments. Rarely was it seen in the wide stretches of open salt marsh favored by many of the other shore birds. The few records for the islands consisted largely of birds found about the pools of fresh water always surrounding the artesian wells. Definite records for the islands are as follows: *Deer Island*—August 6, 1936; April 10, August 28, and September 1, 1937; May 6, 1938; April 26, 1940; April 16, 1943. *Cat Island*—May 5, 1940; May 10, 1942. *Ship Island*—May 1, 1940. Extreme dates of occurrence for the spring migration on the mainland are March 10 (1942) and May 17 (1939), and for the fall migration, July 15 (1938) and September 20 (1940).

Tringa solitaria cinnamomea (Brewster)
Western Solitary Sandpiper

1937: 1 ♂, Bay St. Louis, August 4.

The specimen listed above, considered by H. C. Oberholser to be typical of *cinnamomea*, is my only record for the occurrence of this western race on the coast.

Actitis macularia (Linnaeus)
Spotted Sandpiper

1937: 2 ♀, Gulfport, January 14, August 8; 1 ♀, Deer Island, July 21. 1938: 2 ♂, Deer Island, May 28, June 21. 1940: 1 ♂, Deer Island, July 21.

Since the Spotted Sandpiper was seen on the coast during every month of the year it can be considered, to some extent at least, a resident species.

There are no actual breeding records, however, and to my mind it is extremely doubtful if it ever nested so far south as the Mississippi coast. In every species a certain number of individuals, either because of immaturity or because of some physiological condition, go through the summer months with their reproductive organs dormant. In the case of the Spotted Sandpiper it is always possible to see an occasional bird as late as the end of May, and on one occasion, a male, at the time suspected of being a breeding bird, was seen on Deer Island on June 21 (1938). Until a nest is actually found, or downy young incapable of flight are recorded, the Spotted Sandpiper should be considered of merely casual occurrence late in the spring and early in summer. The first fall transients appear late in July and within a short time these familiar sandpipers are common and of general distribution on this stretch of coast. From late in November until early in April comparatively few are seen, but throughout April and most of May they can be observed daily on the open beaches. Single birds seen at Gulfport on January 2, 1936, and January 3, 1937, in addition to the female taken there on January 14, 1937, constitute the few definite winter records.

Catoptrophorus semipalmatus semipalmatus (Gmelin)
Eastern Willet

1938: 1 ♀, Gulfport, July 13. **1939**: 1 ♀, Deer Island, June 21. **1940**: 1 ♀, Deer Island, June 18. **1941**: 1 ♂, 1 ♀, Deer Island, May 31, June 26. **1944**: 1 ♂, 1 ♀, Deer Island, May 22.

Because of the lack of suitable nesting sites, the Willet was never found breeding on the mainland, but it does nest commonly on the islands. Each year I estimated that approximately ten pairs bred in the wide stretch of open salt marsh in the center of Deer Island. A similar number can likewise be found on the outer islands. A characteristic nest was found on Deer Island on May 29, 1936, that held four partly incubated eggs. It consisted of a slight hollow in the ground lined with fine grasses and was so well concealed that it would have been passed unnoticed had not the incubating bird flushed from almost under foot. I never succeeded in recording the eastern race during the winter months. On the basis of actual specimens taken then it appears that breeding birds completely desert their breeding grounds on the Gulf coast early in the fall and do not return again until late in March or early in April.

CATOPTROPHORUS SEMIPALMATUS INORNATUS (BREWSTER)
WESTERN WILLET

1935: 1 ♂, 1 ♀, Deer Island, July 24, August 23. 1936: 2 ♂, 2 ♀, Deer Island, May 9, November 24, December 26; 1 ♀, Gulfport, August 18. 1937: 2 ♀, Gulfport, July 4, August 22. 1938: 3 ♀, Gulfport, January 22, August 17, December 24. 1939: 1 ♂, Gulfport, May 29. 1940: 1 ♀, Gulfport, July 6.

Except for the month of June, the Western Willet was found on the coast throughout the year. Usually one or two birds were seen feeding with other shore birds on a stretch of open beach, flocks of appreciable size being scarce. The largest number observed at one time was a flock of thirteen at Gulfport on May 4, 1938.

ARENARIA INTERPRES MORINELLA (LINNAEUS)
RUDDY TURNSTONE

1936: 1 ♂, Deer Island, August 13. 1937: 1 ♀, Deer Island, August 11; 1 ♂ im., Gulfport, September 4; 1 ♂, 1 ♀, Ship Island, September 12. 1938: 2 ♀, Gulfport, January 22, May 30; 1 ♀, Deer Island, August 2. 1939: 2 ♂, Gulfport, May 19, December 26; 1 ♀, Deer Island, June 3. 1941: 2 ♀, Deer Island, October 5.

The Turnstone was found to be a fairly common winter resident on the Mississippi coast, appearing early in August, and lingering in the spring until late in May. It was never observed in large numbers. One or two birds, rarely small flocks, were seen feeding on the beaches and sandbars with other shore birds. The largest flocks noted were one of ten birds seen on Ship Island on September 12, 1937, another of twelve at Gulfport on December 10, 1937, and one of eight at Gulfport on March 21, 1938. Extreme dates of occurrence are August 2 (1938) (Deer Island) and May 30 (1938) (Gulfport.)

LIMNODROMUS GRISEUS GRISEUS (GMELIN)
EASTERN DOWITCHER

1936: 3 ♂, 1 ♀, Deer Island, July 16, August 13. 1937: 2 ♂, 2 ♀, Deer Island, July 11, August 11 and 28, September 11; 2 ♂, 1 ♀, Cat Island, July 24; 1 ♂, Ship Island, September 12. 1938: 2 ♂, 1 ♀, July 20, August 13. 1939: 2 ♂, 2 ♀, Deer Island, September 18, October 7 and 13. 1940: 1 ♂, 3 ♀, Deer Island, May 25 and 30, September 6, November 5. 1941: 1 ♂, 2 ♀, Deer Island, March 21, July 21, August 26; 1 ♀, Gulfport, July 1. 1942: 1 ♂, Cat Island, May 10.

Although a common fall transient, the Dowitcher was extremely scarce in the spring and rarely seen then. Over a period of eight years, it was recorded only five times, once in February (Deer Island, February 15, 1942), once in March (Deer Island, March 21, 1941), and three times in May (Deer Island, May 25 and 30, 1940, and Cat Island, May 10, 1942).

In the fall it was never noted in large numbers, but small flocks were of common occurrence on the open beaches from early in July until late in September or early in October feeding with other shore birds. Only once was this species observed later than the middle of October. The largest flock was one seen on Deer Island on August 16, 1941, that held seventeen individuals, although on Cat Island, on July 24, 1937, scattered small flocks totaling sixty of these birds were noted. Extreme dates of occurrence for these fall transients are July 1 (1941) (Gulfport) and November 5 (1940) (Deer Island).

Rather surprising, and difficult to explain, was the complete absence of the Long-billed Dewitcher (*Limnodromus griseus scolopaceus*) on the Mississippi coast. Since it is a common transient and winter resident in southern Louisiana, it was confidently looked for in southern Mississippi, but at no time did I observe a single individual suspected of being the long-billed race.

Capella delicata (Ord)
Wilson Snipe

1936: 2 ♂, Bay St. Louis, December 4. 1942: 1 ♂, Deer Island, February 15. 1943: 1 ♀, Deer Island, April 5.

This well-known game bird occurs commonly on the Mississippi coast during the winter months, appearing in the fall late in September, and lingering in the spring until early in May. Invariably an increase in numbers was noted late in February and in March, when, as on March 11, 1941, as many as thirty of these birds were flushed in one marshy field at Gulfport. Although most frequently observed on the mainland and on Deer Island, it was also noted on the outer islands (Cat Island, January 15, 1938, and Horn Island, January 21, 1939). Extreme dates of occurrence are September 20 (1937) and May 6 (1941).

Philohela minor (Gmelin)
American Woodcock

In view of the abundance of this species in southern Louisiana during the winter months its scarcity on the Mississippi coast was rather surprising. Rarely were more than one or two of these birds seen during the course of a winter and there were occasional years when not a single bird was recorded. Extreme dates of occurrence, based on a total of nine records, are October 30 (1938) and February 11 (1940).

Calidris canutus rufus (Wilson)
American Knot

1936: 1 ♂, Gulfport, September 28. 1938: 2 ♂, Deer Island, June 11, September 24. 1941: 1 ♀, Deer Island, October 29.

The Knot is apparently one of the scarcest of the shore birds occurring on the Mississippi coast, for in addition to the specimens listed above there are only two other records, both from Deer Island. A single bird was seen there on September 9, 1939, and two were seen on July 21, 1941.

Crocethia alba (Pallas)
Sanderling

1935: 1 ♂, 2 ♀, Deer Island, July 24, September 2. 1936: 1 ♂, Deer Island, October 7; 1 ♀, Gulfport, December 6. 1937: 2 ♂, 2 ♀, Ship Island, May 7, September 12. 1938: 2 ♂, Deer Island, June 21, August 6. 1939: 2 ♂, 1 ♀, Gulfport, January 27, May 13 and 31; 1 ♂, 1 ♀, Deer Island, June 3, November 11. 1940: 2 ♂, Deer Island, December 21. 1942: 4 ♂, Deer Island, February 13 and 15; 1 ♀, Gulfport, August 17.

The Sanderling is without question the commonest shore bird of the Mississippi Gulf coast. With the exception of a brief interval late in June and in July small flocks can be found throughout the year feeding on stretches of beach. It appears that many individuals spend only a very short time on their breeding grounds in the far north, for adults in full breeding plumage were seen as late as June 24 (1938), and on their return migration as early as July 21 (1941). Normally, however, these birds were not noted after the first week of June, nor before the end of July.

Ereunetes pusillus (Linnaeus)
Semipalmated Sandpiper

1936: 4 ♂, 1 ♀, Deer Island, June 2 and 21, September 13. 1938: 1 ♀, Gulfport, May 29. 1939: 1 ♂, 2 ♀, Deer Island, May 20 and 27. 1940: 1 ♂, Gulfport, May 8; 4 ♂, 2 ♀, Deer Island, May 10, June 18, December 21. 1942: 1 ♂, Lyman, May 12; 1 ♀, Deer Island, September 22.

Next to the Sanderling, this species is the commonest shore bird on the Mississippi Gulf coast, small flocks being seen throughout the larger part of the year where there are stretches of open beach. There is the usual brief interval late in June and in July when none was seen. So apparently these little sandpipers likewise spend but a short time on their breeding grounds in the far north. In the spring small flocks are of common occurrence through the first week in June, my latest record being June 21 (1936). It is usually the latter part of July before similar small flocks are again observed; the earliest date of arrival is July 11 (1937).

Ereunetes mauri Cabanis
Western Sandpiper

1936: 2 ♂, Ship Island, June 26. 1937: 1 ♂, 1 ♀, Deer Island, July 7, December 13; 1 ♂ im., Gulfport, August 19; 1 ♂, Ship Island, September 12. 1938: 1 ♂, 1 ♀, Gulfport, July 13 and 14; 1 ♀, Deer Island, July 20. 1939: 1 ♂, Deer Island, October 13. 1940: 2 ♂, Deer Island, January 13, December 7; 1 ♂, 2 ♀, Gulfport, April 29, July 11. 1941: 1 ♀, Deer Island, July 21.

Only during the summer months was this species recorded with any degree of frequency, but since it is difficult to separate in the field from the Semipalmated Sandpiper, it may have been overlooked during fall and winter. The one record for the spring months is that of two birds seen at Gulfport on April 27 and 29, 1940. A small flock of four birds noted on Ship Island on June 26, 1936, may have been non-breeding individuals, although by the middle of July additional flocks are usually found on the open beaches. Average dates of arrival (based on specimens taken) are July 7, 1937; July 13, 1938; and, July 11, 1940. The few definite records for the winter, all from Deer Island, are small flocks seen December 13, 1937, and January 13 and December 7, 1940.

Erolia minutilla (Vieillot)
Least Sandpiper

1936: 1 ♂, Bay St. Louis, November 21. 1937: 1 ♀, Deer Island, July 21. 1940: 2 ♂, 1 ♀, Gulfport, May 17 and 22, November 20. 1941: 1 ♀, Deer Island, May 15. 1942: 1 ♀, Deer Island, September 22.

Although occurring on the Mississippi coast during most of the year, the Least Sandpiper was fairly common only late in April and in May, and again the latter part of July and August. For an interval of six weeks, from the end of May until the middle of July, none of these birds were noted, and late in the fall and in winter months only an occasional small flock was seen. The latest date of departure in the spring is May 27 (1940), and for arrival in the fall, July 13 (1938).

Erolia fuscicollis (Vieillot)
White-rumped Sandpiper

1936: 2 ♀, Deer Island, June 2 and 21. 1940: 2 ♂, Gulfport, April 27 and 29.

The White-rumped Sandpiper was found to be one of the least common of the shore birds occurring on the Mississippi coast, and was noted only at infrequent intervals in the spring. Dates of occurrence are represented by the specimens listed above.

Erolia bairdii (Coues)
Baird Sandpiper

1942: 1 ♂, Lyman, November 10.

The only record for the occurrence of this species on the Mississippi coast is the specimen listed above. This constitutes, so far as I am aware, the second definite record for the State.

Erolia melanotos (Vieillot)
Pectoral Sandpiper

1937: 1 ♂, Deer Island, September 11; 1 ♀, Gulfport, October 15. 1938: 1 ♂, 1 ♀, Deer Island, July 20, September 1. 1940: 1 ♂, Deer Island, March 9. 1943: 1 ♀, Gulfport, April 7; 1 ♂, Deer Island, April 24.

The Pectoral Sandpiper is apparently a regular but somewhat scarce transient on the Mississippi coast. Although seen both in the spring and in the fall, it was noted only at infrequent intervals. Rarely were more than five or six individuals found feeding together, although on one occasion, on March 9, 1940, a flock of twenty was seen on Deer Island on a mud flat exposed by the low tide. My extreme dates for the spring migration are March 9 (1940) and April 24 (1943), and for the fall migration, July 20 (1938) and October 15 (1937).

Erolia alpina sakhalina (Vieillot)
Red-backed Sandpiper

1935: 1 ♂, Deer Island, October 21. 1936: 3 ♀, Deer Island, June 2, October 7, November 13. 1937: 1 ♀, Gulfport, October 2. 1939: 2 ♀, Deer Island, May 27, December 19. 1940: 3 ♂, 1 ♀, Deer Island, November 5 and 30, December 21. 1941: 1 ♂, Deer Island, October 29; 1 ♂, 1 ♀, Gulfport, December 12.

The Red-backed Sandpiper is a common winter resident on the Mississippi coast, numerous small flocks being seen on the stretches of open beach throughout the winter months. The species must be a rather hardy bird, for it was the last of the shore birds to arrive in the fall, and was one of the first to depart in the spring. The first small flocks did not usually appear until the middle of October, or later, and only on a few occasions did I find it after the middle of May. Extreme dates of occurrence are October 2 (1937) and June 2 (1936).

Micropalama himantopus (Bonaparte)
Stilt Sandpiper

1940: 1 ♂, Deer Island, April 13.

This species is another of the shore birds that is rarely seen on this stretch of coast. In addition to the specimen listed above, there is only

one other record for its occurrence, a bird noted on Deer Island on August 11, 1937, feeding at the edge of a pool on a sandbar exposed by the low tide.

TRYNGITES SUBRUFICOLLIS (VIEILLOT)
BUFF-BREASTED SANDPIPER

1940: 1 ♀, Deer Island, September 6.

The specimen listed above is the only record for the occurrence of this generally rare sandpiper on the Mississippi coast.

Family PHALAROPODIDAE

STEGANOPUS TRICOLOR VIEILLOT
WILSON PHALAROPE

1938: 1 ♀, Deer Island, September 1.

There are no other records for the occurrence of this phalarope on the Mississippi coast. This particular bird was in full winter plumage, and was found feeding with a flock of Lesser Yellowlegs on a sandbar exposed by the low tide.

Family LARIDAE

LARUS DELAWARENSIS ORD
RING-BILLED GULL

1936: 1 ♂, Gulfport, December 18. 1937: 1 ♀ im., Gulfport, February 26. 1938: 1 ♀, Gulfport, November 25. 1939: 1 ♂, 2 ♀, Deer Island, March 10. 1940: 2 ♀, Gulfport, November 12, December 19. 1941: 1 ♀, Deer Island, May 21. 1942: 1 ♀, Deer Island, March 21. 1943: 1 ♀, Gulfport, January 18.

The Ring-billed Gull is a common winter resident on the Mississippi coast. Scattered small flocks are seen daily from early October until the end of April. Each year a few non-breeding birds lingered throughout the summer months; so actual dates of arrival and departure have been difficult to determine. Two adults seen with Laughing Gulls on Deer Island on September 25, 1941, were unquestionably new arrivals and represented my earliest date for the appearance of this species in the fall. Early in May there is a noticeable decrease in the number of these birds observed, and for an interval of over four months only two or three are seen in the course of a day.

LARUS ARGENTATUS SMITHSONIANUS COUES
HERRING GULL

1935: 1 ♂ im., Deer Island, December 4. 1941: 1 ♀ im., Deer Island, September 25. 1942: 1 ♀ im., Gulfport, January 17.

This familiar gull is likewise a common winter resident on the Missis-

sippi coast, appearing late in September and being rarely seen after the first day of May. Rather noticeable, was the complete absence of adults throughout the winter months. On more than one occasion, flocks totaling over two hundred of these birds were noted in the course of a day, and without exception all were in immature plumage. My two records for adult birds on Deer Island are March 21, 1942, and March 19, 1943. These were apparently new arrivals that had wintered elsewhere. It appears that, to a very large extent, the more mature birds do not come this far south in the fall, whereas the young of the year invariably do. Extreme dates of occurrence for immature birds are September 23 (1941) and May 29 (1936). There is one record for the summer months, a single individual that was seen on Deer Island on June 30, 1937.

Larus hyperboreus Gunnerus
Glaucous Gull

The one record for this species is that of a single bird seen at Gulfport on December 22, 1941. Ordinarily I would be rather reluctant to list a bird so rare as this on the basis of a sight record, but under the circumstances I have no hesitation in doing so. The individual in question appeared after several days characterized by heavy rain and a strong southwest wind, and when first noticed was resting with a large flock of Herring Gulls on a stretch of open beach fronting the harbor. It was possible to approach within 50 yards of it, where its size (larger than the Herring Gull) and the white primaries left no question as to its identification. This is the first record for this species for Mississippi, and apparently only the second record for the entire Gulf area.

Larus atricilla (Linnaeus)
Laughing Gull

1935: 1 ♂, Deer Island, August 16; 1 ♂ im., Gulfport, December 31. 1937: 1 ♂, 1 ♀ im., Deer Island, June 30, August 13. 1938: 1 ♀, Deer Island, July 8. 1940: 1 ♂, 1 ♀, Gulfport, June 15, November 26. 1941: 1 ♂, 3 ♀, Gulfport, January 26, May 25, June 18, December 11. 1942: 1 ♂, 1 ♀, Gulfport, March 15, July 15.

Although to a large extent a resident species on the Mississippi coast, the Laughling Gull is not known to nest there. The nearest breeding colonies are on the Isle au Pitre off the Louisiana coast. There is usually an interval in mid-winter, and again late in the spring, when comparatively few of these birds are seen, but there is no uniformity in this fluctuation in numbers. Some years they may be almost completely absent from

late in November until early in March, while other years small flocks were noted during this period at infrequent intervals. Invariably, however, a perceptible increase occurs in March, and by the end of the month birds in full breeding plumage are abundant. There is another partial hiatus from early May throughout June, but by the first week in July these gulls are abundant again, and of general distribution on the Sound.

Larus philadelphia (Ord)
Bonaparte Gull

1936: 1 ♀, Bay St. Louis, November 21. 1938: 1 ♀, Gulfport, November 25. 1939: 2 ♂, Gulfport, January 28, May 19; 1 ♂, Deer Island, February 22. 1940: 1 ♀, Deer Island, May 10. 1941: 1 ♀, Gulfport, February 2; 1 ♂, 1 ♀, Deer Island, May 15 and 21. 1942: 1 ♀, Bay St. Louis, February 14.

This little gull winters commonly on the Mississippi coast, usually occurring in small flocks from late in November until the middle of May. Only rarely was it seen in any numbers, the largest concentration being noted at Gulfport on March 8, 1942, when twenty-one of these birds were found resting on a sandbar exposed by the low tide. Extreme dates of occurrence are November 10 (1940) and May 21 (1941).

Chlidonias nigra surinamensis (Gmelin)
Black Tern

1936: 1 ♂, Gulfport, August 19. 1937: 2 ♂, Gulfport, July 1, October 2; 1 ♂, Deer Island, August 13. 1938: 1 ♂, 1 ♀ im., Gulfport, July 22, August 20; 1 ♂, Woolmarket, August 1. 1940: 1 ♂, Deer Island, May 13. 1941: 1 ♂, Gulfport, June 5. 1942: 1 ♀, Gulfport, May 2; 1 ♂, Deer Island, August 20.

The Black Tern is a rather scarce transient in the spring, having been noted only three years out of the eight spent on the coast. It was unrecorded in the spring until 1940, when small flocks were seen at the extreme western end of Deer Island on May 13, May 21, and on May 30. In 1941 similar small flocks were seen at Gulfport on May 6 and June 5, and on Deer Island on May 21; whereas in 1942 my one record is that of a single bird found on a pond at Lyman on May 2. In the fall, however, it proved to be fairly common, and was frequently observed from the middle of July until late in September. An exceptionally early date of arrival is June 26 (1937), a flock of twelve of these terns being seen that day at Gulfport. On only one occasion were these birds noted in numbers, the average flock comprising from three or four to twelve or fifteen individuals. On August 23, 1938, fully a hundred Black Terns were found feeding in the harbor at Gulfport. Even though always present until the end of September, comparatively few were seen during October, my latest date of departure being October 13 (1936).

GELOCHELIDON NILOTICA ARANEA (WILSON)
GULL-BILLED TERN

The Gull-billed Tern is of rather limited occurrence on the Mississippi coast. It was recorded by both Ernest G. Holt and Arthur H. Howell (MSS) as apparently breeding on Petit Bois Island in 1913, and two males in the study collection of the Mississippi Game and Fish Commission, at Jackson, were taken at Horn Island on June 6 and 25, 1941. However, there are no records for the mainland, nor any evidence at present that this species occurs even in migration anywhere except on the outer islands.

HYDROPROGNE CASPIA IMPERATOR (COUES)
CASPIAN TERN

1936: 2 ♂, Deer Island, January 21, November 13; 3 ♂, 1 ♀, Gulfport, June 28, September 14. 1940: 1 ♀, Bay St. Louis, December 26.

This conspicuous tern is fairly common on the Mississippi coast throughout the year. Scattered small flocks are seen almost daily. The species is most numerous late in the fall and in winter when birds that nested farther north join the flocks that are resident on the Gulf coast. Flocks of any considerable size are rarely noted. More often than not, one or two birds can be found feeding in the shallow waters of the Sound along with other terns.

STERNA HIRUNDO HIRUNDO LINNAEUS
COMMON TERN

1941: 1 ♂, 1 ♀, Gulfport, May 6; 2 ♂, 1 ♀, Deer Island, June 26, July 27, August 26; 1 ♂, Gulfport, July 25.

I recorded the Common Tern but once in the spring, a flock of eight birds being seen May 6, 1941, in the harbor at Gulfport. The four specimens taken in 1941 are evidence that the species occurs as a fall transient, but the fact must be admitted that the actual status of the species at this season of the year is yet to be worked out. In both the immature and winter plumages it is rather difficult to distinguish from the Forster Terns that are so abundant at that time. Although records are few in number, it possibly occurs regularly during the summer and early fall months.

STERNA FORSTERI NUTTALL
FORSTER TERN

1935: 1 ♂, Deer Island, July 24. 1936: 3 ♂, 1 ♀, Bay St. Louis, March 3, June 6, December 4; 1 ♂, Deer Island, September 10. 1937: 1 ♂, Gulfport, August 9; 1 ♂, Deer Island, September 11. 1938: 4 ♂, 1 ♂ im., 1 ♀ im., Gulfport,

July 2 and 6, August 5 and 21, October 23; 1 ♀ im., Deer Island, August 6. 1939: 4 ♂, Bay St. Louis, February 18, March 11; 2 ♂, Gulfport, February 27, October 8. 1940: 3 ♂, 1 ♀, Deer Island, May 18, July 24, November 13; 4 ♂, 2 ♀, Gulfport, July 2 and 23, September 20 and 24, October 6 and 27; 1 ♂, 1 ♀, Bay St. Louis, December 26. 1941: 1 ♀, Bay St. Louis, January 25; 4 ♂, Gulfport, April 7, August 1, September 19 and 24; 2 ♀, Deer Island, October 5 and 21. 1942: 9 ♂, 5 ♀, Gulfport, March 15 and 27, May 4, July 28, August 7, 21 and 29, September 14, October 25, November 6 and 16, December 2; 1 ♂, Deer Island, September 16. 1943: 1 ♂, 1 ♀, Gulfport, January 18, May 7; 1 ♂, Deer Island, March 2.

The Forster Tern is not known to nest here, although it is a resident species on the Mississippi coast and is abundant except for a brief interval during the winter months. The nearest known breeding colonies are on the near-by Louisiana coast, off the mouth of the Pearl River. After the middle of May there is a noticeable decrease in the number of these birds seen, but throughout June and early in July small flocks are by no means uncommon; these may have been birds that had not reached sufficient maturity to breed. Early in November the large flocks that are so numerous after the middle of July gradually disappear, and after the first of December, and until early in March, no Forster Terns can, with one exception, be seen on this stretch of coast. Each year a limited number of these birds can be found about a cluster of old pilings standing close to the shore a short distance west of Bay St. Louis. Some years there are thirty, other years as few as twelve, but I never failed to find these terns at this place throughout the entire winter, although elsewhere they are completely absent. There is only a single winter record at Gulfport, a bird seen there January 18, 1943.

Sterna albifrons antillarum (Lesson)
Least Tern

1936: 2 ♂, Deer Island, August 6, September 13; 1 ♂, 2 ♀, Gulfport, August 8 and 19. 1937: 4 ♂, 2 ♀, Deer Island, April 21, August 13; 1 ♂, Gulfport, August 5. 1938: 3 ♂, 2 ♀, Gulfport, April 13, July 6, September 3. 1939: 1 ♂, 1 ♀, Gulfport, April 22, May 13; 1 ♂, Deer Island, July 21; 1 ♂, Gulfport, July 27. 1941: 2 ♂, 1 ♀, Deer Island, May 15, June 7 and 26; 1 juv. ♂, Deer Island, August 2. 1942: 3 ♂, 1 ♀, Gulfport, April 26, July 13 and 17, September 18. 1943: 3 ♂, Gulfport, April 11, May 3; 1 ♀, Deer Island, May 15.

This dimunitive tern is a fairly common breeding bird on the Mississippi coast. Small colonies nest on all the islands and at one place on the mainland, a stretch of open beach fronting the Gulfport harbor. At a small colony visited by me on Cat Island on July 24, 1937, the young were possibly half grown. Fully grown young of the year, however, were seen with their parents as early as July 16 (1942), resting on the railing of a pier at Gulfport. It is usually after the middle of April before these

birds appear in the spring, and they are invariably gone by the end of September. Extreme dates of occurrence are April 11 (1943) and September 26 (1937).

Sterna albifrons athalassos Burleigh and Lowery
Interior Least Tern

1936: 4 ♂, 2 ♀, Gulfport, August 19, September 8 and 28. 1937: 1 ♀ im., Gulfport, September 22. 1938: 4 ♂, 1 ♀, Gulfport, June 1, August 8, 17, 21, and 23; 1 ♂, Deer Island, August 25. 1939: 1 ♂, Deer Island, September 27. 1941: 3 ♂, 3 ♀, Gulfport, May 3 and 14, June 8, July 25, September 24; 4 ♂, 1 ♀, Deer Island, May 21, June 7, August 2, September 15. 1942: 1 ♂, 2 ♀, Deer Island, April 27, July 31, August 28; 1 ♂ im., Lyman, August 12. 1943: 1 ♂, Gulfport, September 2.

This well-marked race occurs on the coast as a fairly common transient, both in the spring and in the fall. The perceptibly darker upper parts readily separate this race from the breeding birds with which it associates until rather late in the spring. There is invariably an interval, however, from early in June until late in July when no birds of this interior race are noted. It apparently does not arrive in the spring until early in May, but its departure in the fall occurs late in September, as is also true of *antillarum*.

Thalasseus maximus maximus (Boddaert)
Royal Tern

1936: 1 ♀, Gulfport, August 14; 2 ♂, Round Island, September 3; 1 ♀, Bay St. Louis, December 4. 1938: 1 ♂, 3 ♀, Gulfport, June 10 and 24, August 22. 1941: 1 ♀, Bay St. Louis, January 25; 1 ♀, Gulfport, July 23.

The Royal Tern is another species that is resident on the Mississippi coast. The species is abundant throughout the year, but was not found to nest. Nevertheless it breeds commonly on many of the islands off the Louisiana coast, and it is apparently from that area that Mississippi coast birds appear in large numbers. This supposition is at least partly confirmed by the fact that the female taken on June 24, 1938, at Gulfport, from a flock of twenty of these terns held an egg that would have been laid within 24 hours. There is little fluctuation in numbers from month to month. The flocks that are seen on this part of the coast are as numerous in mid-winter as they are in mid-summer.

Thalasseus sandivicensis acuflavidus (Cabot)
Cabot Tern

1935: 1 ♂, 1 ♀, Deer Island, August 16. 1936: 2 ♂, 1 ♀, Deer Island, May 29, August 6. 1938: 1 ♀, Gulfport, June 5; 1 ♂, 1 ♀, Deer Island, August 13

and 25. 1940: 1 ♂, Deer Island, May 21. 1941: 1 ♂, Deer Island, May 10; 1 ♂, Gulfport, October 19.

This species is by far the least common of the terns occurring on the Mississippi coast, for with few exceptions one or two birds were seen at infrequent intervals during May and again late in July and in August. On only two occasions were sizable flocks noted. On May 29, 1936, forty of these birds were seen on Deer Island, resting with an equal number of Black Skimmers on an expanse of beach; on May 21, 1940, thirty were found at the same place. A single bird observed at Gulfport October 19, 1941, is, by almost two months, my latest record for this species in the fall; otherwise the latest record is August 25 (1938). Other exceptional dates are June 5, 1938 (the only June record), and April 26, 1940 (otherwise not recorded before May 10).

Family RYNCHOPIDAE

RYNCHOPS NIGRA NIGRA LINNAEUS

BLACK SKIMMER

1935: 1 ♀, Gulfport, December 31. 1937: 2 ♂, 1 ♀, Gulfport, January 5, August 12. 1938: 1 ♂, Deer Island, June 21; 2 ♂, Gulfport, July 22, August 29. 1941: 1 ♂, 1 ♀, Gulfport, January 6; 1 ♀, Deer Island, October 5. 1943: 1 ♂, Gulfport, January 17.

The Black Skimmer was found nesting in small numbers on Petit Bois Island by both Ernest G. Holt and Arthur H. Howell (MSS) but apparently breeds nowhere else on the Mississippi coast. However, there are large breeding colonies on Isle au Pitre, off the coast of southeastern Louisiana, and since this island is only a few miles west of Cat Island, it is not surprising that skimmers occur regularly on the Mississippi Sound during the summer months. Although fairly common at this season of the year, these birds attain their greatest numbers on this part of the coast during the winter months. In contrast with the Laughing Gull, this species appears to desert the Louisiana coast to a large extent when winter approaches, and to move eastward to the shallow waters of the Mississippi Sound. This movement occurs during early December, and for several months thereafter Black Skimmers are amazingly abundant. Usually they can be found in scattered flocks during the greater part of the day, resting on the sandbars a short distance out from the shore. Year after year I estimated that fully ten thousand of these birds winter on the Mississippi coast. Only rarely do these flocks contain more than a few hundred individuals, although on one occasion, on December 22, 1941, a flock was seen estimated at five thousand.

Family COLUMBIDAE

ZENAIDURA MACROURA CAROLINENSIS (LINNAEUS)
EASTERN MOURNING DOVE

1935: 1 ♂, 1 ♀, Saucier, November 4 and 12. 1937: 1 ♂, Deer Island, November 23.

This familiar bird is common and is generally distributed throughout the year in the open pine woods along the coast. It occurs both on the mainland and on all the islands, and is as numerous on Ship Island and Horn Island, each lying 16 miles offshore, as at Gulfport or at Biloxi. Early in November birds that nested farther north appear in small flocks, and are present until early in February. After the middle of February only scattered pairs are seen. Breeding activities extend over a period of almost 6 months, for nests holding eggs can be found as early as the middle of March, and as late as the end of August. My earliest breeding record is that of a young bird, fully fledged and out of the nest for several days, seen on Deer Island on April 13, 1940. The latest breeding record is that of a nest found on Deer Island on August 25, 1938, that held two newly hatched young.

COLUMBIGALLINA PASSERINA PASSERINA (LINNAEUS)
EASTERN GROUND DOVE

1936: 2 ♂, Deer Island, October 30, November 29; 1 ♀, Gulfport, November 22. 1937: 1 ♂, Saucier, December 16. 1939: 1 ♀, Deer Island, March 4. 1942: 1 ♀, Deer Island, February 28.

The presence of the Ground Dove as a transient in southern Mississippi was totally unexpected. So far as I am aware there are no actual breeding records for the State. Therefore the birds that appeared each fall in southern Mississippi must have come from the east, rather than from the north. Howell (1924) gives the status of this species in Alabama as "a local and rather uncommon resident in the southern third of the State." From personal experience I am of the opinion that this statement applies also to Georgia. Therefore, it is difficult to understand why a species considered resident within its range should appear with such regularity each fall on the Mississippi coast, and why there should be this tendency to migrate west rather than south into Florida. The fact remains, however, that each year the Ground Dove appears in October, and is seen at frequent intervals on the mainland and on the islands until the latter part of December. It apparently does not remain throughout the winter for I have no records for either January or for February. Extreme dates

for the fall migration, when not more than one or two birds were found at any one place, are October 7 (1941) and December 26 (1936). In the spring it was observed at rather infrequent intervals. My few records, all for Deer Island, are as follows: Two birds on March 4, 1939; one on February 28, 1942, and one on March 19, 1943.

Columbigallina passerina pallescens (Baird)
Mexican Ground Dove

1936: 1 ♀, Gulfport, November 22. 1937: 1 ♀, Deer Island, November 23. 1940: 1 ♀, Gulfport, October 20; 1 ♀, Cat Island, October 23. 1942: 1 ♂, Gulfport, October 28.

The specimens listed above were compared with birds from southern Texas and eastern Mexico, and were found to be typical of this western race. Since they represent practically half the Ground Doves collected on the Mississippi coast, they seem to indicate a migration from west to east just as pronounced as there is from east to west. This presents an even more complex problem with respect to the seasonal movements of this species, and indicates how much is yet to be learned concerning the habits of supposedly well-known birds.

Family Cuculidae

Coccyzus erythropthalmus (Wilson)
Black-billed Cuckoo

1936: 1 ♂, Horn Island, August 21. 1939: 2 ♂, Gulfport, May 14, October 1. 1940: 2 ♀, Deer Island, May 16, September 12. 1941: 1 ♂, Deer Island, August 21; 1 ♂ im., Gulfport, September 14. 1942: 1 ♀, Deer Island, May 13.

The Black-billed Cuckoo occurs as a rather scarce transient on the coast. Frequently the species went unobserved during an entire spring or fall, and it was never recorded more than two or three times in the course of a year. Extreme dates of occurrence for the spring migration are May 5 (1937) and May 16 (1940), and for the fall migration, August 21 (1936 and 1941) and October 1 (1939).

Coccyzus americanus americanus (Linnaeus)
Yellow-billed Cuckoo

1936: 1 ♂, 1 ♀, Saucier, May 26, October 2; 1 ♂ im., 1 ♀ im., Deer Island, July 31, October 13. 1938: 1 ♂, 1 ♀, Gulfport, June 12, October 25; 1 ♀, Deer Island, October 29. 1939: 1 ♀, Gulfport, October 15. 1940: 1 ♀, Ship Island, April 10; 1 ♂, Cat Island, May 5; 1 ♂, Deer Island, May 25. 1941: 1 ♂, 2 ♀,

Deer Island, April 3, August 9, October 11. 1942: 1 ♂ im., Deer Island, August 10. 1943: 1 ♂, Deer Island, May 24.

The Yellow-billed Cuckoo is a fairly common summer resident on the mainland, appearing in the spring early in April (rarely late in March), and lingering in the fall until the end of October. A characteristic breeding record is that of a nest found at Saucier on June 7, 1935, that held three incubated eggs, and that was located 8 feet from the ground in a dogwood in the open pine woods. Since the species does not occur on the islands during the summer months, it was possible to get interesting and rather complete migration data there that would have been extremely difficult, if not impossible, to secure on the mainland. On Deer Island spring transients were present throughout all of April and most of May; the latest date of occurrence was May 25 (1940), when five of these birds were seen feeding in the live oaks. On the outer islands I found the Yellow-billed Cuckoo extremely abundant on occasions during May. Such was the case on Ship Island on May 7, 1937, and May 1, 1940, and on Cat Island on May 5, 1940, and May 10, 1942. The southward movement in the fall begins much earlier than is generally realized for on Deer Island two birds, unquestionably fall transients, appeared in 1936 on July 31. Other years this species invariably was recorded there in early August. On Cat Island it sometimes appeared even earlier; several birds were observed there on July 24, 1937. My earliest date of arrival in the spring is March 28 (1941) (Gulfport), and for departure in the fall, October 29 (1938) (Deer Island).

Crotophaga sulcirostris sulcirostris Swainson
Groove-billed Ani

1937: 1 ♀, Gulfport, November 24.

The specimen listed above is the only record for the occurrence of this species on the Mississippi coast. When first noticed it was feeding alone at the edge of a thicket at the side of a road, and proved to be quite tame and easily approached.

Family Tytonidae

Tyto alba pratincola (Bonaparte)
American Barn Owl

1942: 1 ♀, Gulfport, May 5.

I have only two records for the occurrence of the Barn Owl on the coast. Single birds were seen in woods bordering a stream, a mile east of

Gulfport, on November 18, 1939, and May 5, 1942. The species is doubtless more common than the few records indicate.

Family STRIGIDAE

OTUS ASIO FLORIDANUS (RIDGWAY)
FLORIDA SCREECH OWL

1937: 1 ♂ im., Gulfport, August 10; 1 ♀, Saucier, December 7. 1939: 1 ♂, Gulfport, May 21.

This little owl is fairly common and generally distributed on the mainland where it is found in many of the stretches of woods bordering the streams. I have no records from the islands. A critical examination of the specimens listed above shows clearly that the birds of the Gulf coast should be referred to the Florida race, both on the basis of size and color.

BUBO VIRGINIANUS VIRGINIANUS (GMELIN)
GREAT HORNED OWL

1936: 1 ♀ im., Saucier, June 6. 1940: 1 ♀, Saucier, May 31.

I know of only one place on the coast where the Great Horned Owl can be found with any degree of regularity—a large thickly wooded swamp a few miles east of Saucier. It doubtless occurs wherever conditions are suitable.

SPEOTYTO CUNICULARIA HYPUGAEA (BONAPARTE)
WESTERN BURROWING OWL

1937: 1 ♂, Gulfport, December 11. 1939: 1 ♂, Cat Island, November 1. 1940: 1 ♂, Deer Island, October 26.

Although uncommon and rather infrequently seen, the Burrowing Owl is apparently of regular occurrence on the Mississippi coast during the winter months. Its preference is for the open beaches, especially those bordered by dunes that afford the bird both shelter and the insect life on which it principally feeds. On January 18, 1941, a bird was found in the open pine woods on Deer Island, but this was unusual enough to be commented on in detail in my field notes for the day. There are no records later than the middle of January, but it is possible that an occasional bird remains until early spring.

STRIX VARIA GEORGICA LATHAM
FLORIDA BARRED OWL

1936: 1 ♂, Gulfport, March 29. 1939: 1 ♀, Gulfport, November 18.

The species is the commonest and most characteristic owl of the Mississippi Gulf coast. There are probably no stretches of woods of any size

bordering the numerous streams and bayous in which at least one pair cannot be found throughout the year. Since they are more or less diurnal in their habits, they were recorded almost daily.

Asio flammeus flammeus (Pontoppidan)
Short-eared Owl

The one record for the Short-eared Owl on the coast is that of a single bird seen November 23, 1937, in the stretch of open salt marsh in the middle of Deer Island. It was restless and extremely wary, and invariably flew when I was some distance away.

Family Caprimulgidae

Chordeiles minor minor (J. R. Forster)
Eastern Nighthawk

1937: 1 ♂, Ship Island, September 12. 1940: 2 ♂, 1 ♀, Gulfport, May 29, May 31, June 1. 1941: 2 ♂, Saucier, May 9, June 16; 1 ♂, Gulfport, June 5. 1942: 1 ♂, Gulfport, May 16; 1 ♀, Gulfport, August 3.

On the basis of actual specimens taken, the northern race of the nighthawk appears to be a rather scarce transient on the coast except for a brief interval late in May and early in June. Each year at this time flocks of from ten to thirty birds can be found late in the afternoon feeding low overhead. Specimens collected were clearly referable to *minor* rather than to *chapmani*. A rather late date for the spring migration is June 16 (1941), but the male taken that day at Saucier, from a flock of nine nighthawks feeding over an open field, has a wing measurement of 198 mm.; the maximum for *chapmani* (Ridgway, 1914, pt. 6, p. 574) is 192 (average, 184.1). Further collecting in the fall will probably show this northern race to be a regular and fairly common transient at that time. Unfortunately the flocks were almost without exception feeding high overhead, and the opportunity of determining their identity by collection of specimens was seldom possible.

Chordeiles minor howelli Oberholser
Howell Nighthawk

1939: 1 ♀, Gulfport, October 11.

The specimen listed above is the only record for the occurrence of this western race in Mississippi. It was compared with birds from the breeding range of *howelli* and was found to agree in every respect.

Chordeiles minor aserriensis Cherrie
Cherrie Nighthawk

1936: 1 ♂, Deer Island, April 10.

This specimen is the only record for the occurrence of this Texas race in Mississippi. It was found resting at noon on a stretch of beach, and when it flew upon my approach, its paler coloration at once distinguished it from the breeding birds of the island.

Chordeiles minor chapmani Coues
Florida Nighthawk

1935: 2 ♂, 1 ♀, Saucier, July 25 and 26. 1936: 1 ♀, Saucier, April 26; 1 ♂ im., 1 ♀, Gulfport, September 28 and 30. 1937: 1 ♂, Horn Island, May 12. 1938: 1 ♂, Gulfport, July 9. 1939: 1 ♂, 1 ♀, Gulfport, May 30; 1 ♂, Deer Island, June 21. 1940: 1 ♂, Cat Island, May 5; 1 ♂, Gulfport, June 1; 1 ♂, Biloxi, June 20; 1 ♂, Deer Island, July 4. 1941: 1 ♂, Gulfport, June 30; 2 ♂, Deer Island, May 15, August 2. 1942: 1 ♀, Gulfport, May 5. 1943: 1 ♀, Gulfport, April 25.

This southern race of the Nighthawk is common and generally distributed throughout the summer months, both on the mainland and on the islands. A few individuals were noted early in April, but it is usually after the middle of the month before many are seen, and it is the first of May before these birds are present in any numbers. To some extent at least, nesting must begin very soon after arrival from the winter quarters, for a nest was found on Deer Island on May 9, 1939, that held two fresh eggs. It is probable also that two broods are frequently reared each year, for on July 4, 1940, I flushed two females from nests on Deer Island that held in each case two slightly incubated eggs. A common site for the nest is a stretch of beach, although eggs or young were found equally often in open situations in the pine woods. On the basis of specimens taken, *chapmani* was not recorded later in the fall than September 30 (1936). However, nighthawks were seen as late as October 23 (1935), and it is possible that many of the October records pertain to this southern race.

Caprimulgus carolinensis Gmelin
Chuck-will's-widow

1935: 1 ♀, Deer Island, October 7. 1936: 1 ♀, Deer Island, July 31. 1941: 1 ♀, Deer Island, May 1.

The Chuck-will's-widow is a fairly common bird on the mainland during the summer months. It usually appears shortly after the middle of April and is rarely seen after the end of September. Individuals were observed

from time to time on Deer Island late in April and in May (May 1 and 15, 1941, April 24, and May 12, 1943) but I have no evidence that it actually nests there. Later records (July 31, 1936 and August 25, 1938) probably pertain to transients already on their way south. There is only a single record for Cat Island, a bird flushed from the ground in the open pine woods on September 13, 1940. Extreme dates of occurrence for this species are April 13 (1943) and October 7 (1935).

Caprimulgus vociferus vociferus Wilson
Whip-poor-will

1935: 1 ♂, Saucier, October 4. 1938: 1 ♂, Gulfport, November 27. 1940: 1 ♀, Deer Island, September 12; 1 ♀, Cat Island, September 13. 1941: 1 ♂, Gulfport, September 17. 1942: 1 ♂, Gulfport, November 11.

This familiar goatsucker is a common fall transient both on the mainland and on the islands, and is an uncommon winter resident on the mainland. It is usually shortly after the middle of September when the first birds are flushed in the thicker stretches of woods (September 13, 1937; September 12, 1940; September 17, 1941; and, September 22, 1942), and for several months then they are frequently seen. Only an occasional bird was noted during the winter months, but since they are found at this season of the year in the thickest and most impenetrable woods, more individuals are probably overlooked than are actually seen. I have no records for the spring months; my latest date of occurrence for birds that wintered is January 29 (1939). The adaptability of this species to winter conditions on the Gulf coast is well illustrated by the male taken on November 27, 1938. For three days previous to this date the temperature dropped each night to 26° F., yet when this bird was collected it was found to be exceedingly fat, and its stomach was crammed with small insect remains.

Family Micropodidae

Chaetura pelagica (Linnaeus)
Chimney Swift

1936: 2 nestling ♂, 1 nestling ♀, Gulfport, July 15 and 19. 1937: 1 ♂, Saucier, March 30.

The Chimney Swift is a fairly common summer resident on the Mississippi coast, appearing in the spring in late March or early April, and lingering in the fall until after the middle of October. The one breeding record is that of a nest found at Gulfport on July 15, 1936, that held three almost fully fledged young. The nest was located in a chimney of

an unoccupied house. Each year one pair of these swifts nests in the chimney of a house at the western end of Deer Island, but otherwise I have never recorded this species away from the mainland during the summer months. Unlike most localities in the southeast and in the lower Mississippi valley with which I am famliar, these birds showed little tendency to gather on the Mississippi Gulf coast in large numbers in the early fall. On only a few occasions in late September were as many as a hundred individuals observed at dusk dropping into a chimney in the business section of Gulfport. Lowery (1943) calls attention to the tremendous fall concentrations of swifts at certain Louisiana localities. Banding studies carried on by him show conclusively that these flocks consist of swifts that have converged from all parts of the breeding range, including even the extreme southeastern United States. Hence, swifts from southern Mississippi doubtless also merge with the large flocks in southern Louisiana whence they depart from the United States via the trans-Gulf flyway. The earliest date of arrival in the spring is March 27 (1936); the latest date of departure in the fall, October 20 (1937).

Family TROCHILIDAE

ARCHILOCHUS COLUBRIS (LINNAEUS)
RUBY-THROATED HUMMINGBIRD

1936: 1 ♀, 1 ♂ im., Saucier, October 5 and 14. 1937: 1 ♂, Gulfport, March 27. 1938: 1 ♂ im., Saucier, July 28; 1 ♂, Cat Island, August 30. 1939: 1 ♂, 1 ♀, Gulfport, March 12, October 22. 1940: 1 ♂, Cat Island, September 13. 1941: 1 ♀, Deer Island, May 7. 1942: 1 ♂, Deer Island, March 13. 1943: 1 ♀, Gulfport, March 16; 1 ♀, Deer Island, May 12.

If this species breeds at all in southern Mississippi it must do so very sparingly, for I never succeeded in recording it later in the spring than the middle of May. It is a common transient both in the spring and in the fall, yet there was invariably an interval of two and a half months late in the spring and in summer when no hummingbirds were seen. I consider it extremely doubtful that it ever nests on the coast. The first arrivals usually appear in the spring by the middle of March (earliest dates of arrival, March 12, 1939, March 13, 1942, and March 16, 1943), and for two months then they are seen almost daily. On the islands the species is more frequently observed early in May than on the mainland. It was found on Ship Island (16 miles offshore) as late as May 7 (1937), and on Deer Island as late as May 18 (1940). An interesting feature of the fall migration is the fact that the adult males precede the females and

young of the year by a month or more. This is decidedly at variance with my experience where other small birds are concerned. Years ago I noticed the disappearance of the adult males late in July in the mountains of western North Carolina; thus it was of decided interest to me to note their presence on the Gulf coast in numbers throughout all of August. On August 30, 1938, I spent the day on Cat Island, and my field notes for that date comment on the fact that hummingbirds were abundant and were almost without exception adult males. There is no perceptible decrease in the number of these birds before the middle of October. The latest date of occurrence in the fall is October 26 (1939).

Family ALCEDINIDAE

MEGACERYLE ALCYON ALCYON (LINNAEUS)
EASTERN BELTED KINGFISHER

1936: 1 ♀, Gulfport, December 27. 1942: 1 ♂, Gulfport, August 12.

The Belted Kingfisher is fairly common throughout the year on the Mississippi coast where an occasional bird is usually present about the larger streams and bayous. The species is present on Deer Island throughout the spring and summer months, but since there are no high banks in which to nest, cavities in the larger live oaks are possibly utilized for this purpose. It was noted on an offshore island only during the winter months; several birds were seen on Cat Island on February 24, 1937, and again on December 13, 1939.

Family PICIDAE

COLAPTES AURATUS LUTEUS BANGS
NORTHERN FLICKER

1935: 1 ♂, Saucier, November 14. 1936: 1 ♂, Saucier, October 15; 1 ♂, Gulfport, November 1. 1937: 1 ♂, Saucier, February 11; 1 ♀, Deer Island, October 16. 1938: 1 ♀, Gulfport, January 2. 1939: 1 ♀, Horn Island, January 21; 1 ♀, Deer Island, October 13. 1940: 1 ♀, Deer Island, February 13. 1941: 2 ♂, 1 ♀, Deer Island, March 13, April 10, October 11. 1942: 2 ♂, Gulfport, January 18, November 2. 1943: 1 ♀, Saucier, January 13.

Since the various races of the Flicker are indistinguishable in the field, the status of this northern form on the Gulf coast must be based on the specimens listed above. Apparently the race is a fairly common winter resident.

Colaptes auratus borealis Ridgway
Boreal Flicker

1936: 1 ♂, 1 ♀, Saucier, January 10, October 9. 1940: 1 ♀, Gulfport, October 13. 1941: 1 ♀, Deer Island, April 1. 1943: 1 ♀, Gulfport, February 25.

In all the specimens listed above, the wing measurement is 161 mm. or more. Ridgway (1911, p. 31) gives the following measurements for this extreme northern race: Males, wing, 156-170 mm. (average, 162.5); females, wing, 156-171 (average, 162.3). In *luteus* the average measurements given are: Males, 156.3 mm.; female, 155. Since so few specimens were taken, *borealis* must be considered an uncommon winter resident in southern Mississippi.

Colaptes auratus auratus (Linnaeus)
Southern Flicker

1935: 1 ♂ im., Saucier, June 6. 1936: 1 ♂ im., Saucier, August 26. 1937: 1 ♀, Saucier, January 6. 1938: 2 ♂, 1 ♀, Gulfport, July 15 and 24, December 6. 1940: 1 ♀, Saucier, January 23; 1 ♂, 1 ♀, Gulfport, October 13, December 24. 1941: 1 ♂, Gulfport, June 6. 1942: 1 ♀, Biloxi, December 19; 1 ♂, Gulfport, December 21.

This southern race of the Flicker is a fairly common and generally distributed bird on the mainland throughout the year, occurring both in the open pine woods and in the thicker stretches of deciduous hardwoods bordering the streams. It is not known to nest on the islands, nor has it been found there even casually during the winter months. So far as Deer Island is concerned, this fact is rather surprising, for at its extreme western end, the island is less than a mile from the mainland, and conditions there are much the same as those characterizing the entire Mississippi coast. In view of the limited number of specimens taken after the breeding season that can be referred to *auratus*, it appears that there is little or no increase in numbers late in the fall or in winter. Transients that appear at that time represent the more northern races.

Ceophloeus pileatus pileatus (Linnaeus)
Southern Pileated Woodpecker

1935: 1 ♀, Saucier, June 4. 1936: 1 ♂, 2 ♀, Saucier, October 29, December 22. 1939: 1 ♀, Saucier, December 20. 1941: 1 ♀, Gulfport, August 17.

Although a fairly common bird at Saucier and one that occurs in many of the larger stretches of woods bordering the streams, the Pileated Woodpecker was rarely seen in the vicinity of the coast. During the late summer months an occasional bird appeared about Gulfport. However, through-

out the greater part of the year it is necessary to go inland at least 10 miles before there is any degree of certainty of encountering these large woodpeckers. There are no records for the offshore islands.

Centurus carolinus carolinus (Linnaeus)
Red-bellied Woodpecker

1935: 2 ♀, Saucier, August 14, November 29; 1 ♀, Gulfport, December 25. 1937: 1 ♂, Saucier, December 15. 1939: 1 ♂, Saucier, February 8. 1941: 1 ♀, Deer Island, October 11. 1942: 2 ♂, Gulfport, February 22, November 15; 1 ♂, Biloxi, February 24. 1943: 1 ♂, 2 ♀, Gulfport, October 8; 1 ♂, Saucier, October 31; 1 ♂, 1 ♀, Pearlington, December 29.

The Red-bellied Woodpecker is a common bird on the Mississippi coast where it is found throughout the year in practically all the stretches of woodlands of any size bordering the streams and bayous. On the islands it is apparently a rather rare straggler, for I recorded it but twice away from the mainland. One bird was seen on Cat Island on February 12, 1937, and another on Deer Island on October 11, 1941.

Melanerpes erythrocephalus erythrocephalus (Linnaeus)
Eastern Red-headed Woodpecker

1935: 1 ♂, Saucier, June 4; 1 ♂ im., Deer Island, August 2. 1936: 3 ♂, 1 ♀, Saucier, May 4, June 19, August 20. 1937: 1 ♂ im., Deer Island, January 13. 1938: 1 ♂, 1 ♀, Saucier, June 6, August 12; 1 ♂, Gulfport, June 22; 1 ♀, Deer Island, August 2. 1939: 1 ♀, Gulfport, June 4; 1 ♂, Deer Island, June 21; 1 ♂, Biloxi, June 27. 1940: 1 ♀, Gulfport, January 21. 1941: 1 ♂, 2 ♀, Gulfport, April 6, May 16, June 15; 1 ♀, Biloxi, May 23; 1 ♂, Deer Island, June 7; 1 ♀, Pearlington, June 23; 1 ♀, Saucier, June 24. 1942: 1 ♂, 1 ♀, Gulfport, January 24, February 25; 1 ♀, Cat Island, May 10. 1943: 1 ♀ im., Deer Island, January 1; 2 ♂, 1 ♀, Gulfport, February 25, May 2 and 10; 1 ♂, Saucier, May 23. 1944: 1 ♀, Gulfport, May 21.

This familiar woodpecker is a common bird on the coast during the summer months at which time it is generally distributed in the open pine woods, both on the mainland and on the islands. However, for some obscure reason very few of these birds remain throughout the winter. The majority disappear in late September and only an occasional individual is seen after the middle of October. Since the winters are relatively mild, and since the numerous large live oaks furnish an abundant food supply, it seems rather strange that the Red-headed Woodpecker is not plentiful both during the summer and the winter. This is even more perplexing when it is realized that farther north in the State they have been found on more than one occasion to be rather common in early January and apparently winter there regularly. The fact remains, however, that on the coast it is unusual to see more than one or two individuals

between the first of November and the middle of the following April. There were even occasional years when none were observed during this interval of almost 6 months. On Deer Island, where several pairs nest each year, arrival dates in the spring varied from April 13 (1940) to May 1 (1943); whereas on Cat Island, my earliest record is April 25 (1937).

Sphyrapicus varius varius (Linnaeus)
Yellow-bellied Sapsucker

1935: 1 ♂ im., Saucier, October 5. 1936: 1 ♂, Saucier, January 10; 1 ♂ im., Gulfport, October 4. 1937: 1 ♀, Saucier, May 5. 1938: 1 ♂ im., Gulfport, January 16; 2 ♂, Saucier, November 30, December 23. 1939: 3 ♂, Saucier, January 14, February 23, December 21; 2 ♂, Gulfport, February 5, December 17; 1 ♀ im., Deer Island, October 28; 1 ♀ im., Cat Island, November 1. 1941: 1 ♀, Biloxi, March 29; 1 ♀, Deer Island, April 1; 1 ♀, Saucier, April 9; 1 ♂, Gulfport, December 11. 1942: 2 ♂, Gulfport, March 22 and 23; 1 ♀, Cat Island, March 29. 1943: 1 ♀, Deer Island, January 12; 1 ♀, Biloxi, April 15.

The Yellow-bellied Sapsucker is a common winter resident on the coast. It appears in the fall in early October, and is rarely seen in the spring after the middle of April. Although more frequently observed on the mainland, I have numerous records for Deer Island (extreme dates of occurrence are October 11, 1941 and April 24, 1943), and I also noted it on Cat Island (February 24, 1937 and November 1, 1939) and on Horn Island (November 4, 1937). On the mainland it is almost invariably found in thick woodlands bordering the streams, or in the large live oaks that border the roads, but never in the open pine woods. My earliest date of arrival in the fall is October 4 (1936) (Gulfport); my latest date for departure in the spring, May 5 (1937) (Saucier).

Dryobates villosus auduboni (Swainson)
Southern Hairy Woodpecker

1935: 1 ♂, Saucier, July 24. 1938: 1 ♂, Saucier, January 13. 1942: 1 ♂, Biloxi, December 19.

Although fairly common on the mainland, occurring in many of the stretches of woods bordering the streams, the Hairy Woodpecker was never found on any of the islands. Like so many of the resident species on this part of the Gulf coast, this woodpecker apparently is reluctant to cross even the narrow channel to Deer Island, despite favorable conditions that exist there so far as food and nesting sites are concerned. The few specimens taken are typical of this southern race.

Dryobates pubescens pubescens (Linnaeus)
Southern Downy Woodpecker

1935: 1 ♀, Saucier, December 11. 1936: 1 ♀, Saucier, January 3; 1 ♂, Gulfport, December 25. 1938: 1 ♀, Deer Island, November 2. 1940: 1 ♀, Deer Island, November 30. 1941: 1 ♂, Saucier, December 10. 1942: 1 ♀ im., Biloxi, September 19. 1943: 1 ♂, Gulfport, October 8.

The Downy Woodpecker is a common bird on the mainland, occurring throughout the year in the deciduous hardwoods bordering the streams. Only rarely was an individual found in the open pine woods; so actually it is rather local in its distribution. This species is generally recognized to be migratory to some extent. This fact probably accounts for the appearance of two birds on Deer Island in November. Both in measurements and in the color of the under parts they were found to represent the southern race, *pubescens*.

Dryobates borealis borealis (Vieillot)
Northern Red-cockaded Woodpecker

1935: 4 ♂, Saucier, June 6, October 15, November 13, December 18. 1936: 1 ♂ im., Saucier, July 26. 1940: 1 ♂, Gulfport, December 5. 1942: 1 ♂, Gulfport, January 9; 1 ♂, Saucier, January 16.

Unlike the other woodpeckers, this species is limited in its distribution to the areas of open pine woods. Years ago it was probably a common bird in the southern part of the State, but with the cutting of the virgin timber, the species gradually disappeared, and today is rather uncommon and local in its distribution in this part of the Gulf coast regon. Here and there a few large trees containing suitable nesting sites still remain, and in such places the Red-cockaded Woodpecker can still be found. There are no records for the offshore islands, although on the islands there is an occasional slash pine large enough to suit the rather exacting habitat requirements of the species.

Campephilus principalis (Linnaeus)
Ivory-billed Woodpecker

According to James T. Tanner (1942), the Ivory-billed Woodpecker was never a common bird on the Mississippi coast, and disappeared completely from this area between 1885 and 1900. There is a specimen in the American Museum of Natural History taken at Mississippi City on March 29, 1893. Sight records were listed by Tanner for Bay St. Louis and the Pascagoula swamp.

Family TYRANNIDAE

TYRANNUS TYRANNUS (LINNAEUS)
EASTERN KINGBIRD

1935: 1 ♀, Saucier, July 25. 1936: 1 ♂, Deer Island, March 24. 1937: 1 ♀, Saucier, March 26; 1 ♀ im., Gulfport, September 25. 1939: 1 ♀, Ship Island, May 24; 1 ♂, Gulfport, May 26. 1940: 1 ♂, Saucier, March 22; 2 ♂, 1 ♀, Biloxi, June 20 and 27, July 5; 1 ♂ im., Deer Island, July 21. 1941: 1 ♂, Saucier, March 25; 1 ♀, Gulfport, August 22; 1 ♀, Deer Island, October 1. 1942: 1 ♂, Gulfport, March 25.

The Kingbird is a common summer resident on the Mississippi coast. It appears late in March and occurs on both the mainland and on all the islands until the end of September. I know of no species that arrives with such regularity in the spring as does this flycatcher. As the following dates show, its arrival varies only a few days year after year: 1936, March 24; 1937, March 26; 1938, March 22; 1940, March 22; 1941, March 25; 1942, March 25. The species occurs in its greatest numbers late in August and the first half of September when its unique distinction of being the only flycatcher that gathers together in large flocks for fall migration is well demonstrated. On more than one occasion flocks totaling a hundred or more individuals were seen. The largest flocks recorded were approximately 150 of these birds seen at Gulfport on September 16, 1936, and another of possibly 200 seen there on August 22, 1941. Only once did I note this species after the latter part of September. A single bird was found at the extreme western end of Deer Island on October 1, 1941. September 26 is the average date on which the last bird for the year was recorded.

TYRANNUS VERTICALIS SAY
ARKANSAS KINGBIRD

1936: 1 ♂ im., Gulfport, September 25. 1939: 1 ♀, Cat Island, October 3; 1 ♂, Gulfport, October 11; 1 ♀, Gulfport, October 18. 1940: 1 ♀, Deer Island, October 12.

Although heretofore unrecorded from the State, the Arkansas Kingbird appears to be of at least casual occurrence on the coast during the fall months. The specimens listed above constitute all my records to date, and with one exception only a single bird was seen each time. On Cat Island, on October 3, 1939, two birds were found together at the edge of the open pine woodlands.

Myiarchus crinitus crinitus (Linnaeus)
Southern Crested Flycatcher

1936: 1 ♂, Gulfport, March 18; 1 ♂ im., Deer Island, July 4. 1937: 1 ♂, 1 ♀, Saucier, March 30, September 7; 2 ♂, Gulfport, April 11, August 24. 1938: 1 ♂, 1 ♀, Saucier, June 3, June 25; 2 ♂, Ship Island, June 4; 1 ♂, Gulfport, June 26. 1939: 1 ♂, 1 ♀, Gulfport, April 23, September 7; 1 ♂, Ship Island, May 24; 1 ♀, Saucier, June 6. 1940: 1 ♂, Biloxi, April 16; 1 ♂, Gulfport, September 19; 1 ♂, 1 ♀, Deer Island, September 21, September 27. 1941: 1 ♂, Biloxi, June 14; 1 ♀, Deer Island, September 15. 1942: 1 ♂, 1 ♀, Deer Island, April 27, August 31; 1 ♂, Biloxi, August 26; 1 ♂, Gulfport, September 6. 1943: 1 ♂, Deer Island, May 24.

The Crested Flycatcher is a common breeding bird on the Mississippi coast. It usually appears in the spring late in March or early in April, and is only infrequently seen in the fall after the middle of September. The species is equally plentiful both on the mainland and on all the islands, and since apparently its main requirement is a suitable cavity in which to nest, it can be found indiscriminately in the open pine woodlands and in the stretches of deciduous hardwoods bordering the streams. The earliest date of arrival in the spring for this southern race on the basis of actual specimens taken, is March 18 (1936); the latest date for departure in the fall is September 27 (1940).

Myiarchus crinitus boreus Bangs
Northern Crested Flycatcher

1935: 1 ♂, Saucier, May 10. 1936: 1 ♂, Gulfport, September 8: 1 ♀, Woolmarket, October 1. 1938: 1 ♂, Gulfport, May 7; 1 ♂, Cat Island, August 30; 1 ♀, Deer Island, September 24. 1940: 1 ♂, Deer Island, September 27. 1941: 1 ♂, Deer Island, April 10. 1942: 1 ♂, 1 ♀, Saucier, May 6; 1 ♀, Gulfport August 25. 1943: 1 ♀, Gulfport, April 6; 1 ♂, Deer Island, April 8.

On the basis of the specimens listed above, this northern race of the Crested Flycatcher apparently is a fairly common transient on the coast. It occurs in the spring from early in April through the first week of May, and in the fall from late in August until the first of October. The absence of March records seems to indicate that the breeding birds arrive almost three weeks earlier than those nesting farther north. Rather interesting also is the fact that my latest record in the fall, and the only one for the month of October, is based on a specimen of the northern race. After a critical examination of a small series of both races, I am of the opinion that there is no constant color difference by means of which *boreus* can be separated from *crinitus* so far as the upper parts are concerned. However, *boreus* has a distinctly smaller bill, a character at once apparent when specimens of the northern race are compared with breeding birds from the Gulf coast.

Sayornis phoebe (Latham)

Eastern Phoebe

1935: 1 ♀, Saucier, October 3. 1936: 1 ♀, Saucier, March 12; 1 ♂, Gulfport, October 31. 1937: 1 ♂, Saucier, September 28. 1939: 1 ♂, Gulfport, December 25. 1940: 1 ♂, Gulfport March 18. 1941: 1 ♀, Deer Island, October 11. 1943: 1 ♀, Gulfport, March 20.

Although an occasional bird was seen the last few days in September, the Phoebe usually appears in the fall in early October and does not become plentiful until several weeks later. Throughout the winter months, it is a common bird on the coast, and is frequently noted both on the mainland and on all the islands. On Deer Island it was seen as early as September 30 (1936); however, the average date of arrival there is October 12. I found it fairly plentiful on Horn Island, 16 miles offshore, on November 4, 1937, and in equal numbers on Cat Island on November 1, 1939. After the first of March there is a noticeable decrease in the number of these birds observed, and only rarely is one seen toward the end of the month. The earliest date of arrival in the fall is September 28 (1937) and the latest date for departure in the spring, April 7 (1938).

Empidonax flaviventris (Baird and Baird)

Yellow-bellied Flycatcher

1936: 1 ♀, Saucier, September 18; 1 ♀, Deer Island, October 13. 1938: 2 ♀, Cat Island, August 30. 1940: 1 ♂, Gulfport, May 12; 1 ♂, 2 ♀, Gulfport, September 11, 22, and 23; 1 ♀, Cat Island, September 13. 1941: 1 ♀, 1 ♂, Deer Island, August 9 and 21.

In view of the difficulty of recognizing this species in the field, I consider it advisable to judge its status entirely on the basis of specimens taken. It appears, therefore, considering the eleven specimens listed above, that the Yellow-bellied Flycatcher is a regular and not uncommon fall transient on the Mississippi coast, but is only of accidental occurrence in the spring. At frequent intervals late in August and throughout September, small flycatchers of the genus *Empidonax* were almost abundant. Close scrutiny of these birds usually revealed the presence of at least one individual of this species. From time to time during each spring migration, I collected small flycatchers that I suspected might be *flaviventris,* but with the one exception (the male taken at Gulfport on May 12, 1940), they proved to be Acadian Flycatchers with a distinct yellow tinge to the under parts.

Empidonax virescens (Vieillot)

Acadian Flycatcher

1935: 1 ♂, Saucier, September 26. 1936: 1 ♂, Gulfport, April 8. 1937: 1 ♂, 1 ♀, Ship Island, May 7; 1 ♂, 1 ♀, Gulfport, September 14 and 19. 1938: 1 ♂, 1 ♀, Deer Island, April 30, May 6. 1939: 2 ♀, Deer Island, May 9; 1 ♀, Gulfport, May 14. 1940: 2 ♂, 1 ♀, Cat Island, May 5, September 13, October 23; 2 ♂, 1 ♀, Deer Island, May 10, September 26 and 27; 1 ♀, Gulfport, September 23; 1 ♂, Biloxi, September 28. 1941: 1 ♂, 1 ♀, Deer Island, May 7, November 8; 1 ♂, 1 ♀, Gulfport, June 25, August 20. 1942: 1 ♂, Cat Island, May 10. 1943: 1 ♀, Deer Island, April 19; 1 ♀ im., Gulfport, October 8.

The Acadian Flycatcher is a common breeding bird in southern Mississippi; but as with so many other species, in the immediate vicinity of the coast, it occurs as a transient only. Until 1941, I did not find it nesting nearer the coast than Saucier, a locality approximately 20 miles inland. That year a single pair was found throughout June in a woodland bordering a stream 8 miles north of Gulfport; there is little doubt they nested there. It is usually the middle of April before this species appears in the spring (earliest date of arrival, April 8, 1936, at Gulfport), while on the islands transients were frequently noted until almost the middle of May. Extreme dates of occurrence on Deer Island are April 19 (1943) and May 10 (1940); on Cat Island it was noted May 5, 1940, and May 10, 1942, and on Ship Island, May 7, 1937. It is apparently the middle of September, or even later, before the southward movement is well under way; for a male taken on Cat Island on September 13, 1940, is my earliest record in the fall for the islands. On the mainland these flycatchers are fairly plentiful through the first week of October. The latest dates for the fall migration are for the islands; a female was collected on Cat Island on October 23, 1940, and another female on Deer Island on the rather late date of November 8, 1941.

Empidonax traillii traillii (Audubon)

Alder Flycatcher

1936: 2 ♂, 1 ♀, Deer Island, August 31, September 10 and 30; 1 ♂, 2 ♀, Gulfport, September 7, 19, and 29. 1937: 2 ♂, 3 ♀, Deer Island, September 1, 13, and 24; 1 ♂, 1 ♀, Gulfport, September 6 and 16; 1 ♀, Ship Island, September 12. 1938: 2 ♂, 2 ♀, Deer Island, August 18, September 1 and 24; 2 ♂, Cat Island, August 30. 1939: 2 ♂, 1 ♀, Gulfport, September 7, 10, and 19; 2 ♀, Saucier, September 8; 1 ♀, Deer Island, September 9. 1940: 2 ♂, 1 ♀, Deer Island, September 6, October 5; 1 ♀, Gulfport, September 14; 1 ♂, 1 ♀, Saucier, September 17 and 18. 1941: 1 ♂, 3 ♀, Deer Island, August 21, September 20 and 25, October 1; 2 ♂, 1 ♀, Gulfport, September 24, October 4 and 6. 1942:

2 ♂, 1 ♀, Deer Island, August 15, 24, and 31. 1943: 1 ♀, Deer Island, August 26.

Considering the fact that there are not over half a dozen published records for the occurrence of the Alder Flycatcher as a transient in the southeastern United States, I was greatly interested in finding the species actually abundant during the fall on the Mississippi coast. Judging from available evidence, the autumnal migration of individuals that breed in northeastern United States is to a very large extent southwestward in direction; apparenly only an occasional bird comes directly south. This results in a concentration of these little flycatchers within a rather circumscribed area on the Gulf coast west of southern Alabama, preparatory for their flight across the Gulf of Mexico. That this is the route almost invariably followed seems to be substantiated by the fact that year after year Alder Flycatchers are plentiful on this stretch of coast from the middle of August until early in October. Ordinarily a few birds are seen in the course of a morning spent in the field, but there were occasions when they were extremely numerous. On August 31, 1936, possibly thirty were seen on Deer Island, while on September 13, 1937, September 9, 1939, and on September 12, 1942, approximately half this number were noted in underbush at the western end of this island. The earliest date of arrival in the fall is August 9 (1941), and the latest date of departure is October 8 (1941). Average dates of arrival and departure over a period of 8 years are August 18 and September 24. The species was not detected in the spring.

Empidonax traillii brewsteri Oberholser
Little Flycatcher

1941: 1 ♂, Deer Island, August 16.

The specimen listed above, identified by J. Van Tyne, represents this western race of the species. Its measurements are as follows: wing, 75 mm.; tail, 60; culmen, 11.5. While further collecting might reveal the presence of other examples of this race on the Mississippi coast, this subspecies is apparently rather rare this far eastward.

Empidonax minimus (Baird and Baird)
Least Flycatcher

1935: 1 ♂, Deer Island, October 7. 1936: 1 ♂, 2 ♀, Deer Island, July 31, August 31; 1 ♂, Round Island, September 3. 1937: 1 ♂, Ship Island, September 12; 1 ♂, 1 ♀, Deer Island, September 13 and 24; 1 ♀, Gulfport, October 1; 1 ♀, Saucier, November 9. 1938: 1 ♂, 3 ♀, Deer Island, August 6, September 1 and 24; 3 ♂, 3 ♀, Cat Island, August 30. 1939: 1 ♂, 2 ♀, Cat Island, Octo-

ber 3; 1 ♀, Deer Island, October 13. 1940: 1 ♂, 2 ♀, Deer Island, September 12, October 5; 1 ♂, Cat Island, September 13; 1 ♂, Gulfport, September 22. 1941: 1 ♀, Deer Island, September 15.

Statements above pertaining to the Alder Flycatcher apply almost equally well to this species, which also is considered an extremely rare transient in the southeastern United States. There are very few published records of its occurrence south of its breeding range, yet on the Mississippi coast, it was found to be fairly common in the fall. Since it is rather difficult to distinguish in the field from the other small flycatchers, I recorded only those specimens actually collected. It is safe to say, however, that one or two birds were seen in the course of any one day's field work from the end of August until the middle of October, and that frequently they were present in considerable numbers. On August 30, 1938, I found small flycatchers of this genus plentiful on Cat Island. Few of the numerous live oak thickets scattered through the open pine woods were without several of these birds. That day I tentatively identified no less than ten Least Flycatchers; in six cases I confirmed the identifications by collecting the specimens. The one July record (Deer Island, July 31, 1936) was rather exceptional, as was also a single bird seen on Deer Island on August 6, 1938. Otherwise it was the latter part of August before these birds appeared in southward migration. Only infrequently was this species recorded after the middle of October, although a single bird was found in a thicket near Saucier as late as November 9 (1937).

Myiochanes virens (Linnaeus)
Eastern Wood Pewee

1936: 1 ♂, 2 ♀, Saucier, March 28, July 1 and 22. 1937: 1 ♂, Gulfport, August 15. 1938: 2 ♂, Gulfport, April 6, August 14; 1 ♂, 2 ♀, Deer Island, October 29. November 2. 1939: 1 ♀, Deer Island, May 13. 1940: 3 ♀, Deer Island, May 10 and 16, October 26; 1 ♂, Saucier, October 30. 1941: 1 ♂ im., 1 ♀, Gulfport, May 17, July 26; 1 ♀, Deer Island, August 16. 1942: 1 ♀, Deer Island, May 14; 1 ♀, Gulfport, July 30. 1943: 1 ♂, Biloxi, April 27; 1 ♂, 2 ♀, Deer Island, May 12 and 24, August 26.

This is another species that is a common breeding bird in the southern part of the State, but is one which occurs only as a transient in the immediate vicinity of the coast. An occasional pair of these birds was found nesting each year at Saucier, a locality about 20 miles inland. None was found breeding closer to the coast. The first birds appear in the spring late in March or early in April, and are soon fairly plentiful both on the

mainland and on the islands. Since the species does not breed on the islands, I was able to secure migration data there showing far more clearly the seasonal movements of the species than was possible on the mainland. On Deer Island, Wood Pewees are seen more frequently early in May than at any time in April, and are usually fairly plentiful in the open pine woodlands until the middle of the month. Extreme dates of occurrence for the spring migration are April 10 (1937) and May 24 (1943). They were observed likewise on all trips to the outer islands during the month of May, as follows: Cat Island, May 5, 1940, and May 10, 1942; Ship Island, May 7, 1937, and May 1, 1940; and Horn Island, May 12, 1937. The southward movement is well under way by late summer, for on Deer Island, the first birds usually appeared by the middle of August (earliest date, August 16, 1941), and by the end of the month were frequently seen in the open pine woodlands. On Cat Island my earliest record of fall migration is that of a single bird seen on August 30, 1938. Throughout September and early October these birds are fairly common, after which there is a decrease in the number observed. Only an occasional bird lingers until early in November. The earliest date of arrival in the spring is March 28 (1936) (Saucier); the latest date of departure in the fall, November 2 (1938) (Deer Island).

Pyrocephalus rubinus mexicanus Sclater
Vermilion Flycatcher

1940: 1 ♂, Gulfport, December 6. 1942: 1 ♂, Bay St. Louis, January 17.

Although the two specimens listed above constitute the only records to date for the occurrence of this species in the State, its appearance in recent years at many points on the Gulf coast indicates that it is gradually becoming a regular winter resident in this region.

Family Hirundinidae

Iridoprocne bicolor (Vieillot)
Tree Swallow

1935: 1 ♂, Deer Island, December 30. 1937: 1 ♂, Bay St. Louis, February 21; 1 ♀, Gulfport, July 28. 1939: 1 ♂, Gulfport, March 1. 1940: 2 ♂, 1 ♀, Gulfport, January 20, April 19; 1 ♂, Deer Island, January 31. 1942: 1 ♂, Bay St. Louis, January 17. 1943: 1 ♂, Gulfport, January 5; 1 ♂, Deer Island, January 12.

The Tree Swallow is a common winter resident on the Mississippi coast; the first fall migrants often arrive as early as the last of July and

invariably by the middle of August. Although small flocks were usually seen throughout the winter months, feeding overhead, there were brief intervals when abnormally low temperatures caused a surprising concentration of these birds. Apparently when the temperature drops below 20° F. (not a common occurrence this far south), insects become dormant and to a large extent unavailable. During such times these swallows feed almost entirely on myrtle berries, assembling in large numbers about the myrtle thickets which border expanses of open marsh. It was under just such conditions that fully 2,000 Tree Swallows were seen near Pearlington on November 30, 1936, and that another concentration totaling 2,500 of these birds was observed at Gulfport on February 26, 1937. The coldest weather in the history of Gulf coast weather bureau stations was recorded during the latter part of January, 1940. Temperatures between 13° and 25° F. persisted for a period of 10 days. During this interval, the only Tree Swallows seen were approximately 1,000 that fed each day on myrtle berries that fortunately were abundant in thickets bordering a bayou near Gulfport. In the spring, the number of flocks seen do not usually decrease noticeably until late in April, and it is several weeks later before the species is recorded for the last time. The latest date of occurrence in the spring is May 15 (1939).

Riparia riparia riparia (Linnaeus)

Bank Swallow

1936: 1 ♀, Saucier, August 12. 1937: 1 ♂ im., Gulfport, July 28.

Although a common transient in the fall, the Bank Swallow was found to be extremely scarce in the spring on the Mississippi coast. It was constantly watched for during the spring, but was noted only twice, when single birds were seen at Gulfport on April 19, 1940, and at Cat Island on May 10, 1942, each time feeding with other swallows. In the autumnal migrations, it usually appeared late in July, and was invariably common throughout most of August. At that time, I frequently found this species quite plentiful on Deer Island. The numerous small flocks that were seen during the course of a morning, feeding overhead, invariably flew from east to west, the length of the island, and continued westward along the mainland. Extreme dates of occurrence for this swallow for the fall migration are July 28 (1937) and September 11 (1937).

STELGIDOPTERYX RUFICOLLIS SERRIPENNIS (AUDUBON)
ROUGH-WINGED SWALLOW

1935: 2 ♂, 1 ♀, Gulfport, July 23, October 2 and 9; 2 ♂, 1 ♀, Saucier, September 2, 23, and 27. 1936: 5 ♂, 3 ♀, Saucier, June 5, August 12, 25 and 29, September 9, October 1, 10 and 12; 2 ♂, 1 ♀, Woolmarket, July 27, September 15; 1 ♀ im., Gulfport, August 4; 1 ♂ im., Biloxi, August 17. 1937: 2 ♂, Gulfport, May 31, July 28; 1 ♂, 2 ♀, Saucier, October 18. 1938: 2 ♂, 2 ♀, Saucier, July 29, August 4 and 10, October 19. 1939: 2 ♂, Gulfport, March 8, May 12. 1941: 1 ♂, Gulfport, March 20. 1942: 1 ♂, Saucier, July 29. 1943: 1 ♂, Gulfport, March 17.

The Rough-winged Swallow breeds rather sparingly on the Mississippi coast, an occasional pair having been found from year to year nesting in a bank at the side of a road, or in a similar situation at the edge of a stream. It is usually the middle of March before the first birds appear in the spring, and only the comparatively few individuals that nest here are seen during the next month or two. Individuals that breed farther north apparently reach their summer quarters by a route that does not touch the Gulf coast of Mississippi. In the fall, however, exactly the opposite situation proved to be true. I have always been interested in the early date at which these birds disappeared after the breeding season throughout the larger part of their breeding range in the eastern United States. This early departure was the case not only in Pennsylvania, where I first became familiar with this species, but also in localities where I lived in western North Carolina and in Georgia. Late in July, when the broods of young were fully grown and capable of long flights, the Rough-winged Swallows gradually became scarce, and only rarely were one or two of these birds seen as late as the middle of August. However, after my first year in southern Mississippi, there was no longer any question as to the whereabouts of these swallows in the late summer months. The reason for their early departure still remains to be explained, for neither the weather nor the available food supply in August are factors that can justify this apparent urge to leave at the earliest possible moment. Yet, I find it equally difficult to understand why they apparently are satisfied once they reach the Gulf coast, for there they concentrate in surprisingly large numbers that decrease to no appreciable extent for over two months. Each year the first small flocks appeared by the middle of July, and by the first of August these flocks totaled literally into the thousands. There seems to be no tendency to gather together in large numbers, nor to be more abundant at once place than at another. The average flock held from twenty to fifty individuals, and could be found resting on telephone wires along the roads, or feeding low overhead, each mile of road having its

quota of flocks. After the first of October these birds gradually disappeared, and by the middle of the month only a few small aggregations remained. The earliest date of arrival in the spring is March 8 (1939); the latest date of departure in the fall, October 20 (1938).

Since apparently nothing has appeared in the literature concerning the postnuptial plumage of this species, a few comments might well be made at this time in regards to the plumage of the Rough-winged Swallow during the fall and early winter months. Almost immediately after the arrival of the first small flocks in July, the postnuptial molt begins and continues over a period of a month or more. The breeding plumage is thereby replaced by a complete molt that radically changes the appearance of the birds. Instead of being plain grayish brown above, the plumage of the upper parts is a very dark brown, this color being uniform from the crown to the upper tail coverts. Winter birds taken in eastern Mexico were found to retain this distinctive color of the upper parts until late January, at which time wear begins to be evident and the birds generally acquire the characteristic breeding plumage observable in March. There is no spring molt, wear alone producing the change in plumage.

Hirundo rustica erythrogaster Boddaert
Barn Swallow

1936: 1 ♂ im., Deer Island, July 31; 1 ♀, Saucier, August 25. 1937: 1 ♂ im., Saucier, October 18. 1938: 1 ♂, Saucier, April 28. 1939: 3 ♂, Gulfport, May 23, October 27, November 8. 1940: 2 ♀, Gulfport, July 23, October 10. 1942: 1 ♂ im., Gulfport, December 8.

The familiar Barn Swallow is a common transient on the Mississippi coast, occurring in the spring from early April until late in May (rarely early in June), and in the fall from late in July until early in December. In the spring it is most common during the first week in May when numerous small groups are seen feeding overhead. In the fall it is even more abundant than in the spring, especially during the last two weeks of August. On mornings spent on Deer Island during this interval late in summer, there were few occasions when small flocks of ten to thirty of these birds were not overhead, invariably flying from the eastern to the western end of the island, and then on to the mainland. Extreme dates of occurrence in the spring are April 7 (1941) and June 8 (1941), and in the fall, July 23 (1940) and December 8 (1942). The December 8 record was of two birds seen at Gulfport, and was rather unexpected for the latest previous record was November 13 (1940).

Hirundo rustica insularis Burleigh
Gulf Coast Barn Swallow

1936: 1 ♀, Ship Island, June 26. 1938: 7 ♂, 2 ♀, Ship Island, June 4, July 1; 2 ♂, 1 ♀, Cat Island, July 1. 1939: 3 ♂, 1 ♀, Ship Island, May 24. 1940: 1 ♂, 3 ♀, Ship Island, April 10, May 1.

This recently described race, distinguished by its pale, almost white, under parts, has a rather limited distribution in the State. It is known only from two breeding colonies on Ship Island (Fort Massachusetts and the U. S. Quarantine Station), and one on Cat Island (Lighthouse). There is no evidence that it ever reaches the mainland, for it was never recorded north of the outer islands. Arrival in the spring is apparently earlier than that of transients breeding farther north for two birds seen by me on Ship Island on April 1, 1938, were reported by the Quarantine Station keeper to have been present there the day before. Breeding activities likewise begin at a rather early date. My first visit to the Quarantine Station on Ship Island was on May 7, 1937, and on that day six occupied nests were found. Four were under the eaves of one of the houses, and two were on beams under the dock. Three were difficult to reach and were not disturbed. The other nests were examined and were found to hold respectively, six well-incubated eggs, four eggs equally well-incubated, and two fresh eggs. Without exception, nests built during previous years were used, the top of each being rebuilt for a depth of possibly an inch, and then relined with grasses and feathers. Judging from their size, and the condition of the mud used, several of the nests had been in use for at least three or four years. The following year, on June 4, 1938, this small colony was revisited, and on this occasion twelve pairs of swallows were found breeding there. One nest held five fully fledged young, whereas from the others the young had already flown. On Cat Island, the swallows took advantage of the only suitable nesting place, the beams supporting the lighthouse. A small colony of six pairs was found there on July 1, 1938. I have no records for the fall months; so it is probable that these swallows depart rather early.

Petrochelidon pyrrhonota albifrons (Rafinesque)
Northern Cliff Swallow

1936: 1 ♀, Deer Island, July 31; 2 ♀, Saucier, September 9. 1937: 1 ♂ im., Gulfport, July 28. 1940: 1 ♂, Bay St. Louis, May 4.

The Cliff Swallow is a scarce and rather irregular transient on the Mississippi coast, occurring in small numbers, and at rather infrequent intervals, both in the spring and in the fall. The species is possibly most

numerous during the first two weeks of September, there being one occasion, September 11, 1937, when small flocks of these swallows were constantly passing overhead while I was spending the morning on Deer Island. This circumstance, however, was decidedly exceptional, for usually I recorded this species only two or three times each spring and fall, and then in but a few small flocks. Extreme dates of occurrence in the spring are April 19 (1940) and May 7 (1941), and in the fall, July 28 (1937) and September 20 (1942).

Progne subis subis (Linnaeus)
Purple Martin

1936: 1 ♂, Saucier, May 28; 1 ♂ im., Deer Island, July 31. 1939: 2 ♂, Gulfport, February 28, June 22; 1 ♀ im., Deer Island, June 28. 1940: 3 ♂, 2 ♀, Gulfport, February 24, May 27 and 29, June 19. 1941: 1 ♂, Gulfport, February 28. 1942: 1 ♂, Pass Christian, February 16; 1 ♀, Gulfport, September 11; 1 ♀, Saucier, September 15.

This handsome swallow is a common summer resident on the Mississippi coast, nesting wherever gourds or houses are provided for its use. There are small colonies on both Deer Island and Ship Island, but on the other islands these birds occur as uncommon transients only. Although reported as early as late in January by Dudley Heiliger at the United States Fish Hatchery at Lyman, the first birds do not usually appear in the spring until the middle of February, and the species is not plentiful before the first of March. Each summer hundreds of martins roost at night in several large live oaks in front of the Gulfport Post Office, but they disappear rather abruptly about the middle of August, and after that date very few are seen. My earliest date of arrival in the spring is February 14 (1942); the latest date of departure in the fall is September 20 (1942).

Family Corvidae

Cyanocitta cristata cristata (Linnaeus)
Southern Blue Jay

1935: 1 ♂, 2 ♀, Saucier, July 26, October 15, December 5. 1936: 1 ♀, Gulfport, January 2. 1937: 4 ♂, Gulfport, May 14, October 31, November 25, December 25; 1 ♂, Cat Island, July 24; 1 ♂, Saucier, December 8. 1938: 1 ♂, Gulfport, May 1; 3 ♀, Saucier, July 19, November 9 and 10. 1939: 2 ♂, 1 ♀, Saucier, January 20, February 9, October 17; 1 ♀, Gulfport, December 23. 1940: 2 ♂, 1 ♀, Gulfport, January 30, December 1 and 10; 1 ♂, Saucier, February 14; 1 ♀ im., Biloxi, July 9. 1941: 1 ♂, Bay St. Louis, February 15; 1 ♂, Saucier, November 28. 1942: 1 ♂, Saucier, January 7; 1 ♂, Cat Island, January 25; 1 ♀, Biloxi, February 24; 1 ♂, Deer Island, March 13; 1 ♂ im., Gulfport, July 16; 1

♀, Pass Christian, December 5; 1 ♂, Ocean Springs, December 17. 1943: 1 ♂, Saucier, January 4; 1 ♂, Biloxi, January 7; 1 ♀, Gulfport, February 26.

This familiar bird is common and of general distribution throughout the year on the mainland, occurring both in the open pine woodlands and in the stretches of deciduous hardwoods bordering the streams. While there is no obvious reason why it should not nest on Deer Island, its status there is that of an irregular straggler late in the winter and during the spring months. Each year one or two birds appear on Deer Island after the middle of January and are seen at infrequent intervals then until late in May. Extreme dates of occurrences are January 18 (1941) and May 22 (1944). It apparently breeds on Cat Island, for Blue Jays were noted there throughout the year (July 24, 1937; August 30, 1938; January 25 and May 10, 1942), but otherwise this species is not known to nest away from the mainland. In view of the possibility of *bromia* occurring on the coast during the winter months, twenty-eight of the specimens listed above were taken at this season of the year to determine the presence of this northern form. Without exception, however, all specimens are clearly referable to *cristata,* both in respect to color and to measurements. It is doubtful if the northern race reaches southern Mississippi except possibly in very limited numbers.

Corvus brachyrhynchos paulus Howell
Southern Crow

1935: 2 ♂, 1 ♀, Saucier, October 18, November 12. 1937: 1 ♂, Gulfport, October 19.

Although a common bird on the Mississippi coast, the Crow is never seen there in flocks of appreciable size. Even during the winter months, there is apparently little tendency to congregate in considerable numbers, or to establish large roosts as characteristic of these birds farther north. There are no records for the islands; hence this crow is another resident species that is restricted entirely to the mainland.

Corvus ossifragus ossifragus Wilson
Fish Crow

1936: 1 ♂, Deer Island, July 4. 1937: 1 ♂, Deer Island, April 10. 1939: 1 ♂, 2 ♀, Gulfport, March 12.

The Fish Crow is a common bird on this part of the Gulf coast, but is rather limited in its distribution for it never ventures far inland. It

breeds on both the manland and on all the islands, but whereas small flocks are frequently seen on the mainland throughout the winter, it never occurs on any of the islands at this season of the year. On Deer Island, where I had the opportunity of studying the movements of this small crow in some detail, I found that it was rarely seen in the fall after the middle of September. I have only two records for October and one record for November. My latest record is that of a single bird seen on November 8, 1941. In the spring the first birds usually appear the last of February, although there were years when none were seen until the end of March. My earliest date for arrival in the spring is February 24, 1943.

Family PARIDAE

PARUS CAROLINENSIS GUILLOTI OBERHOLSER

LOUISIANA CHICKADEE

1935: 1 ♂, Saucier, September 26; 2 ♂, Gulfport, December 15. 1936: 1 ♀, Pearlington, December 15. 1938: 1 ♂, 1 ♀, Gulfport, March 17; 1 ♂, Saucier, March 17. 1939: 1 ♂, Gulfport, December 25. 1942: 1 ♀, Biloxi, December 12; 1 ♂, Gulfport, December 31.

The Carolina Chickadee is a common bird on the mainland, for there are few stretches of woods bordering the streams in which it cannot be found throughout the year. It was never seen on the islands, although it is probable that sooner or later it will be recorded on Deer Island. A few of the specimens listed above were examined by H. C. Oberholser, and were identified by him as *guilloti*. This identification is used tentatively, pending the completion of a study of the Carolina Chickadees now in progress.

PARUS BICOLOR (LINNAEUS)

TUFTED TITMOUSE

1935: 2 ♂, 1 ♀, Saucier, June 6, December 2. 1941: 2 ♀, Deer Island, November 8, December 2.

The Tufted Titmouse is another common resident species on the mainland that occurs in practically all stretches of woods of any size that border the numerous streams and bayous. Not until 1941 was it recorded away from the mainland. That year two birds were seen on Deer Island on November 8, and a single bird was observed almost a month later, on December 2.

Family SITTIDAE

SITTA CAROLINENSIS CAROLINENSIS LATHAM

FLORIDA WHITE-BREASTED NUTHATCH

Although a common breeding bird further north in the State, this species is apparently of merely accidental occurrence on the coast. My one record is that of a single bird seen near Saucier on April 20, 1936.

SITTA CANADENSIS LINNAEUS

RED-BREASTED NUTHATCH

1937: 1 ♂, Horn Island, November 4; 1 ♂, Deer Island, November 23. 1938: 1 ♂, Deer Island, October 29; 1 ♂, Saucier, December 22. 1939: 1 ♂, 1 ♀, Saucier, January 16 and 17; 1 ♀, Deer Island, December 7. 1941: 2 ♂, 1 ♀, Deer Island, October 11, December 2 and 13; 1 ♂, 1 ♀, Gulfport, November 29; 1 ♂, Saucier, December 3. 1942: 4 ♂, 7 ♀, Deer Island, January 6, 15, and 21, February 13 and 28, March 7, 13, and 26, April 23, May 1 and 8; 1 ♂, Cat Island, January 25; 2 ♂, Gulfport, February 8, March 31. 1943: 1 ♂, Deer Island, November 1.

The Red-breasted Nuthatch is not as erratic in its occurrence on the Mississippi coast as I expected it would be, for although seldom very plentiful, it nevertheless proved to be a regular winter resident, both on the mainland and on the islands. It is usually the last of October or the first week in November when the first birds appear in the fall, and for several months then, one or two can be seen here and there in the open pine woodlands. The winter of 1941-42 produced a most unusual invasion of these birds on the Gulf coast, for they came south that year in surprisingly large numbers and were abundant over an area extending eastward to western Florida and westward to eastern Texas. In Mississippi two birds appeared on Deer Island on October 11, an unusually early date of arrival, and within two weeks, the species was found literally everywhere. Rarely were more than two or three birds seen at one place, the largest number observed at one time being four. On Deer Island small flocks occurred the length of the island, and by early spring, I decided that at least fifteen of these nuthatches had spent the winter there. On my one trip to Cat Island during the winter, on January 25, I spent only a short time in the open pine woods at the extreme eastern end of the island; but, even so, I noted three of these birds there, two at one place and one at another. On the mainland they were frequently seen throughout the winter in many of the stretches of open pine woods, and on several occasions were even found in the deciduous hardwoods bordering the streams. There was no perceptible decrease in the number of small flocks

seen until early April, and it was May 8 before this species was last seen (a single bird noted on Deer Island).

Sitta pusilla pusilla Latham
Brown-headed Nuthatch

1935: 1 ♂ im., Pass Christian, July 10; 1 ♂, Saucier, October 15; 1 ♀, Deer Island, October 21. 1936: 1 ♂, Deer Island, January 21; 1 ♂, Saucier, November 18; 1 ♂, Gulfport, December 25. 1937: 2 ♂, Cat Island, February 12. 1942: 2 ♂, 2 ♀, Biloxi, January 10, December 25; 1 ♀, Deer Island, January 15.

This little nuthatch is a common bird on the mainland, and is of general distribution in the wide stretches of open pine woodlands. Except during the breeding season, which is in March and early April, it can be found throughout the year in small restless flocks that feed in the upper branches of the larger trees. It occurs on Cat Island and on Deer Island, but not on the other islands that lie farther offshore. Although rather plentiful on Deer Island at one time, it decreased in numbers in recent years until it is doubtful if it actually nests there now. A possible explanation of this unexpected decrease is the fact that opossums were liberated on the island a few years ago and have increased rapidly in number. Since the food supply of these mammals is very limited, birds nesting in cavities, as do the nuthatches, may have been destroyed consistently year after year. If such is the case, the Brown-headed Nuthatch will soon disappear completely, for efforts by residents of the island to get rid of the opossums have met with little success.

Family Certhiidae

Certhia familiaris americana Bonaparte
Brown Creeper

1935: 1 ♀, Deer Island, October 7. 1937: 1 ♂, Saucier, March 12; 1 ♀, Gulfport, October 20. 1938: 1 ♀, Gulfport, January 23. 1939: 1 ♀, Saucier, February 8; 1 ♂, Cat Island, November 1; 1 ♀, Gulfport, November 5; 1 ♂, Woolmarket, November 10. 1940: 1 ♂, 2 ♀, Gulfport, January 19, March 11, December 8; 1 ♀, Biloxi, March 8; 1 ♀, Deer Island, October 19. 1941: 2 ♀, Deer Island, October 11, December 2. 1942: 1 ♀, Gulfport, March 27; 1 ♂, Deer Island, November 8; 1 ♀, Ocean Springs, December 28. 1943: 1 ♀, Deer Island, January 1.

The Brown Creeper is a fairly common winter resident on the Mississippi coast, usually appearing shortly after the middle of October, and disappearing in the spring toward the end of March. While occasionally seen in the open pine woodlands on the mainland, the creeper's preference is for the thick stretches of hardwoods bordering the streams. These

birds can be seen there throughout the winter months. On Deer Island it is not uncommon as a fall transient, but was noted only infrequently during the winter and early in spring. I observed it only twice on the outer islands, but it undoubtedly occurs there more often than my few records indicate. Two birds were seen on Horn Island on November 4, 1937, and three on Cat Island on November 1, 1939. The earliest date of arrival for this species in the fall is October 7 (1935); the latest date of departure in the spring is March 27 (1942).

Certhia familiaris nigrescens Burleigh

Southern Brown Creeper

1936: 1 ♀, Saucier, January 10. 1939: 1 ♂, Gulfport, December 17. 1940: 2 ♀, Gulfport, February 10, March 18. 1941: 1 ♀, Gulfport, November 9. 1942: 1 ♂, Deer Island, February 13; 1 ♀, Gulfport, December 10. 1943: 1 ♂, Gulfport, March 13; 1 ♀, Biloxi, March 21.

On the basis of the specimens listed above, this Southern Appalachian race of the Brown Creeper appears to be at least of casual occurrence on the Gulf coast during the winter months. It apparently arrives more than a month later in the fall than do the birds breeding farther north, but it departs at almost the same time in the spring.

Family Troglodytidae

Troglodytes aëdon aëdon Vieillot

Eastern House Wren

1941: 1 ♀, Gulfport, February 16.

The eastern race of the House Wren is apparently extremely scarce on the Gulf coast. The specimen listed is the only one so identified from a series of sixty-one specimens.

Troglodytes aëdon baldwini Oberholser

Ohio House Wren

1935: 2 ♂, Deer Island, October 7 and 12; 3 ♂, Gulfport, October 13, November 28, December 25; 1 ♀, Saucier, October 14. 1936: 1 ♀, Deer Island, January 21; 1 ♂, Saucier, January 23; 3 ♂, 1 ♀, Gulfport, April 4 and 16, September 29, November 22. 1937: 5 ♂, 3 ♀, Gulfport, January 2, February 19, October 15, 17, and 30, December 5, 19, and 29; 2 ♀, Deer Island, January 13, December 31; 4 ♂, 1 ♀, Saucier, February 5, September 28, November 5 and 22, December 16; 1 ♂, Petit Bois Island, December 21. 1938: 1 ♂, Saucier, January 21; 2 ♂, 1 ♀, Gulfport, March 10, April 15 and 17; 1 ♂, Deer Island, September 24. 1939: 1 ♀,

Saucier, January 23; 1 ♂, 1 ♀, Gulfport, February 12, October 27; 1 ♂, Deer Island, September 27; 1 ♂, Cat Island, November 1. 1940: 1 ♂, 3 ♀, Gulfport, March 5, April 21 and 27, October 6. 1941: 3 ♂, Gulfport, January 12, March 28, December 15; 1 ♀, Saucier, December 4. 1942: 1 ♂, 1 ♀, Deer Island, January 6, December 7; 1 ♂, 4 ♀, Gulfport, January 11, September 27, November 1, December 2 and 11; 1 ♂, Biloxi, February 24; 1 ♂, Saucier, December 14. 1943: 2 ♂, Gulfport, January 9, February 23.

The House Wren is a common winter resident on the Mississippi coast, occurring on both the mainland and on all the islands throughout the winter months. It is equally at home in the palmetto thickets in the open pine woodlands, and in the tangled briar thickets bordering the streams, where often it might be passed unnoticed were it not for its harsh scolding notes. After the middle of April, an occasional bird can be heard singing, but even then it consistently remains well hidden in the densest thickets. As indicated above, the race recently described from Ohio is the form commonly found on the Gulf coast.

Troglodytes aëdon parkmanii Audubon
Western House Wren

1937: 1 ♂, Cat Island, February 12; 2 ♀, Gulfport, April 9, May 1. 1942: 1 ♂, Saucier, December 14.

On the basis of the specimens listed above, this western race of the House Wren is apparently of at least casual occurrence on the Mississippi coast during the winter months.

Troglodytes troglodytes hiemalis Vieillot
Eastern Winter Wren

1937: 1 ♀, Gulfport, December 4. 1938: 1 ♀, Gulfport, March 12. 1939: 1 ♀, Saucier, February 4; 1 ♀, Gulfport, October 16; 1 ♂, Cat Island, November 1. 1942: 1 ♂, Biloxi, November 14. 1943: 1 ♀, Saucier, April 13.

This diminutive wren is a fairly common winter resident on the mainland where it is found in many of the thicker stretches of woods bordering the streams from the middle of October until the following April. It apparently rarely reaches the islands, for it was noted only twice on Deer Island (October 12, 1935, and November 5, 1938) and once on Cat Island (November 1, 1939). The birds seen then were feeding in palmetto thickets in the open pine woodlands, and seemed oddly out of place in such a situation. The earliest date of arrival for this species in the fall is October 12 (1935); the latest date of departure in the spring is April 15 (1943).

TROGLODYTES TROGLODYTES PULLUS (BURLEIGH)
SOUTHERN WINTER WREN

1936: 2 ♀, Gulfport, January 25, November 19. 1938: 1 ♂, 1 ♀, Gulfport, October 25 and 30; 1 ♀, Deer Island, November 5. 1939: 1 ♂, Gulfport, October 29. 1940: 1 ♂, 1 ♀, Gulfport, February 22, April 15. 1941: 1 ♀, Gulfport, March 2. 1942: 1 ♀, Gulfport, December 10. 1943: 1 ♂, 2 ♀, Gulfport, January 11, March 6 and 13.

Judging from the number of specimens taken, this Southern Appalachian race is apparently more common on the Gulf coast during the winter months than typical *hiemalis*. The small series taken on the Gulf coast shows the Southern Winter Wren to be a well-marked subspecies, for it is appreciably darker both above and below than more northern breeding birds.

THRYOMANES BEWICKII BEWICKII (AUDUBON)
BEWICK WREN

1935: 1 ♀, Deer Island, October 7; 1 ♀, Saucier, November 7. 1936: 1 ♂, 1 ♀, Saucier, January 9, November 25. 1937: 1 ♀, Saucier, September 28. 1938: 1 ♂, 1 ♀, Saucier, January 17, December 26. 1939: 3 ♀, Saucier, February 15, March 1, December 21. 1940: 1 ♂, Biloxi, March 6; 1 ♀, Saucier, September 17; 1 ♂, Deer Island, October 19. 1941: 1 ♂, Saucier, December 7. 1942: 1 ♂, Gulfport, December 9.

The Bewick Wren is a fairly common winter resident on the Mississippi coast, an occasional bird being seen on the mainland feeding about thickets or stretches of underbrush bordering the roads or open fields. It is essentially a bird of the more open county, and, in my experience, consistently avoids the thick woods along the streams and bayous. Like so many of the species that occur commonly on the coast during the winter months, it shows a marked reluctance to leave the mainland, for I noted it only on Deer Island at rather infrequent intervals. If it reaches the outer islands at all, it must be largely of accidental occurrence there. My few records for Deer Island are of single birds seen October 7, 1935; October 19, 1940; October 11, 1941; September 28, 1942; and October 13, 1944. The earliest date of arrival for this species in the fall is September 17 (1940); the latest date of departure in the spring, March 25 (1941).

THRYOMANES BEWICKII ALTUS ALDRICH
APPALACHIAN BEWICK WREN

1937: 1 ♂, Saucier, December 23. 1939: 1 ♀, Gulfport, October 1. 1940: 1 ♀, Saucier, March 14. 1941: 1 ♀, Deer Island, October 11. 1943: 1 ♂, Saucier, December 29; 1 ♀, Lyman, December 30.

J. W. Aldrich has recently examined all the Bewick Wrens taken on the Mississippi coast, and has identified the specimens listed above as representing the race he described from the eastern United States.

THRYOTHORUS LUDOVICIANUS EURONOTUS LOWERY
SOUTHEASTERN CAROLINA WREN

1935: 1 ♂, 2 ♀, Saucier, October 4, 5, and 9. 1937: 2 ♂, 1 ♀, Gulfport, February 23, November 14, and 20; 2 ♀, Saucier, February 25, December 20. 1938: 1 ♀, Saucier, March 17; 1 ♂, 2 ♀, Gulfport, April 2, May 11, October 30; 1 ♂, 1 ♀, Deer Island, October 29. 1940: 3 ♂, 2 ♀, Gulfport, February 24, November 23, December 25. 1941: 1 ♂, 2 ♀, Gulfport, March 12, December 21. 1942: 1 ♂, Ocean Springs, December 17; 1 ♀, Gulfport, December 31. 1943: 3 ♀, Gulfport, January 3, 14, and February 21; 1 ♂, Saucier, January 4; 1 ♂, 1 ♀, Biloxi, January 7. 1944: 1 ♀, Gulfport, October 12; 1 ♂, Deer Island, October 13.

The Carolina Wren is a common resident species on the Mississippi coast, being found on the mainland in all the stretches of woodlands bordering the streams. An occasional bird was seen feeding in the palmetto thickets in the open pine woodlands, but ordinarily these wrens do not venture far from the underbrush along the streams and bayous. On Deer Island they occur of necessity largely in the palmetto thickets. A recent critical examination of the series listed above reconfirms my original opinion that this recently described race is worthy of recognition. It is appreciably darker both above and below than typical *ludovicianus,* and in addition has a smaller bill than either *ludovicianus or miamensis.* Although it might be considered somewhat intermediate between these two races so far as its dorsal coloration is concerned, its extensive range in the southeastern United States where it is strictly resident, combined with its minor but constant morphological differencies, justify its subspecific recognition.

THRYOTHORUS LUDOVICIANUS BURLEIGH LOWERY
BURLEIGH CAROLINA WREN

1937: 3 ♂, 1 ♀, Cat Island, February 12 and 24; 2 ♂, 1 ♀, Horn Island, November 4; 1 ♀, Petit Bois Island, December 21. 1938: 1 ♂, 1 ♀, Horn Island, March 20; 2 ♂, Ship Island, April 1. 1939: 1 ♂, Horn Island, January 21. 1942: 3 ♂, 2 ♀, Cat Island, January 25, March 16.

This insular race of the Carolina Wren is a common bird on all of the outer islands. It is well distributed in the long stretches of open pine woodlands that characterize these islands. The ground cover there is predominantly the dwarf palmetto that forms almost impenetrable thickets. It is in these thickets that the wrens are found. They are usually shy, and are quite adept at keeping out of sight; so unless searched for they are rarely seen. Representing as they do a sedentary species, it is probable that they occurred there when the islands were originally a part of the mainland. Their adaptation to conditions so radically different from those under which the species lives on the mainland, combined with their present isolation, has doubtless permitted the differentiation and perpetuation

of the characters that make them distinct at the present time. Observation over a period of years revealed little fluctuation in numbers, and they should continue to be one of the commonest birds of these isolated islands.

Telmatodytes palustris palustris (Wilson)
Long-billed Marsh Wren

1936: 2 ♀, Bay St. Louis, January 11. 1939: 1 ♀, Gulfport, October 1; 1 ♂, Deer Island, November 11.

Although not typical, the specimens listed above are referred to *palustris* because of their small size and distinctly reddish upper parts.

Telmatodytes palustris iliacus Ridgway
Prairie Marsh Wren

1935: 1 ♂, Deer Island, October 7; 1 ♀, Graveline Bayou, November 5. 1937: 1 ♀, Gulfport, September 27. 1938: 1 ♂, Gulfport, January 19. 1939: 1 ♀, Gulfport, October 1; 1 ♂, Deer Island, November 11. 1940: 1 ♂, Deer Island, September 26; 1 ♂, Gulfport, October 9. 1942: 1 ♂, Deer Island, September 26. 1943: 1 ♂, Deer Island, May 1.

The Prairie Marsh Wren appears to be a fairly common winter resident on the Mississippi coast. Comparatively few of the Long-billed Marsh Wrens seen during the winter months were taken, but of the small series now on hand sixty per cent were found to represent this mid-western race. Although normally seen in the stretches of salt marsh, an occasional bird appeared in the fall in a rather odd environment. Single birds were seen twice in a palmetto thicket in the open pine woodlands on Deer Island, and several others were seen at Gulfport feeding in thickets at the edge of large pecan orchards. The earliest date of arrival for this species in the fall is September 22 (1942); the latest date of departure in the spring is May 8 (1943).

Telmatodytes palustris thryophilus Oberholser
Louisiana Marsh Wren

1938: 1 ♀, Deer Island, April 30. 1939: 1 ♀, Deer Island, November 11. 1941: 5 ♂, 1 ♀, Pascagoula, June 3; 3 ♂, Pascagoula, October 26. 1942: 1 ♂, 1 ♀, Pascagoula, May 8. 1944: 1 ♀, Deer Island, October 13.

Although there is no scarcity of suitable habitat, this species is extremely local in its distribution on the Mississippi coast during the summer months. Both on the mainland and on the islands there are marshes in which it could nest, but I know of only two widely separated places where it now breeds. These are the wide stretch of salt marsh at the mouth of

the Pascagoula River, and a similar marsh at the mouth of the Pearl River, south of Pearlington. Here these wrens occur in scattered pairs in the high reeds that border the numerous pools and stretches of open water. They are probably largely resident in these marshes, for at Pascagoula I found them as plentiful late in October as they were early in June. Specimens taken during the breeding season were typical *thryophilus*.

CISTOTHORUS PLATENSIS STELLARIS (NAUMANN)
SHORT-BILLED MARSH WREN

1935: 1 ♀, Saucier, October 4. 1936: 1 ♀, Saucier, November 20. 1938: 1 ♀, Cat Island, January 15. 1939: 1 ♂, Gulfport, December 14. 1942: 1 ♂, Gulfport, April 28; 1 ♂ im., Deer Island, September 28. 1943: 2 ♂, Deer Island, January 1, April 16.

The Short-billed Marsh Wren is a fairly common winter resident on the Mississippi coast, usually appearing in the fall in early October, and lingering in the spring until the end of April. On the islands it occurs in the stretches of salt marsh, with an evident preference for the edges where the marsh grass is short and thick. On the mainland, however, its habits are radically different. There it is found in fields or open places in the pine woodlands that are overgrown with broom sedge, but at times it ventures into thickets bordering such sites. During the non-breeding season the presence of water is seemingly a minor consideration where these birds are concerned; so even the driest fields have a normal population, provided the broom sedge is thick enough to afford sufficient shelter. The earliest date of arrival in the fall is September 28 (1942); the latest date of departure in the spring is April 28 (1942).

Family MIMIDAE

MIMUS POLYGLOTTOS POLYGLOTTOS (LINNAEUS)
EASTERN MOCKINGBIRD

1936: 2 ♀, Saucier, January 6, December 3. 1937: 1 ♂, 1 ♀, Gulfport, September 30, October 1. 1941: 1 ♂, 1 ♀, Deer Island, January 18, March 21. 1942: 1 ♂, im., Gulfport, August 2. 1943: 1 fledgling ♀, Gulfport, May 10. 1944: 1 ♂, 2 ♀, Gulfport, October 10; 2 ♂, 1 ♀, Biloxi, October 11; 2 ♀, Gulfport, October 12.

This familiar bird is common and is of general distribution throughout the year on both the mainland and all the islands, occurring wherever there are thickets or stretches of underbrush in which it can nest. While less often observed during the winter months, it is nevertheless present in its usual numbers, for it is merely quiet and rather inconspicuous at this season of the year.

Dumetella carolinensis (Linnaeus)
Catbird

1935: 1 ♂, Saucier, September 25. 1936: 1 ♂, 1 ♀, Saucier, January 17, September 20; 2 ♂, Gulfport, May 7, December 13. 1937: 1 ♀, Gulfport, December 25. 1938: 1 ♀, Deer Island, April 9. 1939: 1 ♀, Horn Island, January 21; 1 ♀, Deer Island, January 26; 1 ♂, Gulfport, September 17. 1940: 2 ♂, 1 ♀, Deer Island, April 30, May 25 and 30; 1 ♂, Gulfport, September 15. 1942: 1 ♂, Cat Island, January 25; 1 ♂, Gulfport, May 17; 2 ♀, Deer Island, September 12, November 13. 1943: 1 ♀, Biloxi, January 6.

The Catbird occurs on the Mississippi coast as a common transient and as a rather uncommon winter resident. The presence of wintering birds frequently made it rather difficult to determine the actual date of arrival of spring transients, but they apparently appear after the middle of April, and are always plentiful by the end of the month. Departure in the spring is often surprisingly late. Although the species is normally gone by the middle of May, on more than one occasion birds were seen on Deer Island until almost the first of June. In the fall they usually appear by the middle of September, are plentiful within a few days, and remain so for a month or more. During the winter months only an occasional bird is seen in the thicker stretches of woods, but as they are quiet and inconspicuous at that time, many are doubtless overlooked. Extreme dates of occurrence for the spring migration are April 13 (1940) and May 30 (1940), and for the fall migration, September 12 (1942) and October 25 (1940).

Toxostoma rufum rufum (Linnaeus)
Eastern Brown Thrasher

1935: 2 ♂, Saucier, December 5 and 17. 1936: 3 ♂, 1 ♀, Saucier, January 16 and 20, May 8, July 8; 2 ♀, Gulfport, January 25, October 11. 1937: 1 ♂, Gulfport, December 5. 1939: 1 ♀, Gulfport, June 18. 1940: 2 ♂, 2 ♀, Gulfport, January 12, November 10, December 22, and 25; 2 ♀, Deer Island, February 21, June 28. 1941: 1 ♂, 2 ♀, Gulfport, May 11, and 16, October 18; 1 ♀, Biloxi, June 19. 1942: 1 ♀, Deer Island, November 3; 3 ♂, Gulfport, December 4, 18, and 26; 1 ♂, Saucier, December 14. 1943: 1 ♀, Biloxi, January 6; 1 ♂, Saucier, March 17; 1 ♂, Gulfport, May 10.

The Brown Thrasher is a common bird throughout the year on the mainland, occurring about thickets and underbrush in woods bordering the streams. While it nests on the islands, it is by no means plentiful there. Usually two pairs can be found on Deer Island during the summer months, and it occurs in possibly the same numbers on the outer islands. In the winter, however, these birds were seen on the outer islands as frequently as on the mainland.

TOXOSTOMA RUFUM LONGICAUDA (BAIRD)
WESTERN BROWN THRASHER

1939: 1 ♀, Saucier, February 17; 1 ♀, Saucier, December 21. 1940: 1 ♂, Saucier, February 16.

This western race of the Brown Thrasher, characterized by its longer tail and paler upper parts, is apparently at least of casual occurrence on the Mississippi coast during the winter months.

Family TURDIDAE

TURDUS MIGRATORIUS MIGRATORIUS LINNAEUS
EASTERN ROBIN

1935: 1 ♀, Gulfport, November 2; 1 ♂, Saucier, December 11. 1936: 1 ♂, Saucier, January 9. 1937: 1 ♂, Saucier, November 15. 1938: 1 ♂, Horn Island, March 20; 2 ♂, Deer Island, October 29, December 21. 1939: 2 ♀, Saucier, January 12, December 22; 1 ♀, Horn Island, January 21; 2 ♂, Gulfport, February 25, October 30. 1940: 4 ♂, 3 ♀, Gulfport, January 14, February 25, March 3, 10, and 20, November 27, December 3; 3 ♂, Saucier, January 15, December 20; 1 ♀, Cat Island, February 4; 1 ♂, 2 ♀, Deer Island, February 13, and 21, March 16. 1941: 2 ♂, 4 ♀, Gulfport, February 5, 14, and 27, March 11, and 25, November 6, December 11; 1 ♂, Saucier, November 6. 1942: 2 ♂, 2 ♀, Gulfport, February 10, March 2, 8, and 18; 2 ♂, Biloxi, February 24; 1 ♂, Saucier, November 10. 1943: 1 ♂, Gulfport, February 18; 1 ♂, Deer Island, March 11.

The Robin is a common winter resident on the Mississippi coast, large flocks being frequently seen throughout the winter months both in the open pine woods and in the thick woods bordering the streams. The first flocks do not usually appear until early November, but almost at once they become plentiful. Although they occur regularly on the islands, the flocks seen there are never numerous, and they contain relatively few individuals. Finding a hundred or more of these birds feeding together on gall berries in open pine woods on the mainland, was a common occurrence; whereas, on Deer Island a flock of even twenty Robins was exceptional. Until the first of March there is no noticeable decrease in either the number or the size of the flocks seen. After that date, however, they disappear rapidly, and by the middle of the month only an occasional bird is seen. March 21 is the average date on which the last bird was noted in the spring.

TURDUS MIGRATORIUS ACHRUSTERUS (BATCHELDER)
SOUTHERN ROBIN

1936: 1 ♂, Gulfport, February 13; 1 ♀, Deer Island, April 10; 1 ♀, Saucier, November 16. 1937: 1 ♂, Saucier, January 18. 1939: 2 ♀, Gulfport, January 15, February 19; 1 ♂, 1 ♀, Deer Island, January 26, December 7; 1 ♀, Biloxi, February 2. 1940: 1 ♂, 1 ♀, Deer Island, March 2, and 9; 1 ♂, 1 ♀, Biloxi,

March 6 and 21. 1941: 1 ♂, Gulfport, January 16; 1 ♂, Deer Island, May 7. 1942: 2 ♂, Gulfport, January 18, December 2; 1 ♀, Deer Island, November 13. 1943: 2 ♀, Gulfport, February 16, March 3; 1 ♀, Deer Island, February 24.

On the basis of the specimens taken, the southern race of the Robin appears to be far less plentiful on the coast than typical *migratorius,* for less than a third of the Robins collected were found to represent *achrusterus.* The species is reported to have nested for several years at Biloxi, but I have no definite breeding records myself. Of interest in this connection, however, is the fact that a bird taken by me on Deer Island on May 7, 1941, was a male of this race with enlarged testes suggestive of a breeding bird. It is not at all improbable that a pair of these birds nested at Biloxi during that year, and that the male merely happened to have crossed the open channel to the island on the morning I found it there in the open pine woods.

Turdus migratorius propiniquus Ridgway
Western Robin

1941: 1 ♀, Gulfport, March 11.

Although not typical, the specimen listed above was referred to this western race both by John W. Aldrich and Alden H. Miller. Miller, in commenting on its characters, wrote as follows: "Dorsal coloration not olivaceous enough for *propinquus,* although it is paler than typical *migratorius.* Size typical *propinquus*—far out of size range of *migratorius.*" Although intermediate in its characters, this specimen is closer to *propinquus* than to *migratorius,* and is therefore considered to represent the western race.

Turdus migratorius nigrideus Aldrich and Nutt
Newfoundland Robin

1936: 1 ♀, Saucier, January 20. 1940: 1 ♂, Saucier, February 16. 1941: 1 ♂, Gulfport, March 6. 1942: 1 ♂, Gulfport, December 21.

This well-marked race is probably more common on the Gulf coast than the few specimens taken indicate. The appreciably darker upper parts readily separate this race from *achrusterus* and *migratorius,* but this character is frequently rather difficult to detect in the fall and winter when the blackish bases of the feathers are partly obscured by light tips. Being familiar with the abundance of the Newfoundland bird on its breeding range, I am confident that the few available records for it from the southern United States merely indicate that the race has been largely overlooked.

Hylocichla mustelina (Gmelin)
Wood Thrush

1935: 3 ♂, 1 ♀, Saucier, June 7, October 19, and 23, November 1; 1 ♂, Deer Island, October 12. 1936: 1 ♂, Gulfport, April 8; 1 ♀ im., Saucier, July 9. 1937: 1 ♂, Gulfport, March 28. 1938: 1 ♂, Gulfport, March 29; 1 ♀ im., Saucier, August 24. 1939: 1 ♂, Gulfport, June 27; 1 ♀, Saucier, June 23. 1940: 1 ♂, Ship Island, May 1; 2 ♂, Gulfport, May 28, June 2. 1941: 2 ♂, 1 ♀, Deer Island, April 1, May 7, and 10. 1942: 2 ♂, 1 ♂ im., Gulfport, May 11, July 14, August 22. 1943: 2 ♂, Gulfport, April 4, May 9.

The Wood Thrush is a fairly common summer resident on the Mississippi coast, although it nests only on the mainland and is rather local in its distributon there. There were certain favored stretches of woods where the species was found year after year. There were other similar areas that appeared to offer the same inducements but in which the species occurred only as an uncommon transient. Proximity to the coast is apparently no factor in its distribution, for it was just as common about Gulfport or about Biloxi during the summer months as it was at Saucier, 20 miles inland. In the spring the first birds usually appear the last week in March, and within a week or ten days become plentiful. On Deer Island, where the species does not breed, it arrives as early as it does on the mainland, and small flocks are frequently observed there until the middle of May (latest record, May 13, 1942). There are a few records for the outer islands (Cat Island, April 25, 1937, and Ship Island, April 10 and May 1, 1940). The fall migration begins the latter part of September, for at this time, the first small flocks reappear on Deer Island. Although noted as early as September 22 (1936), it is usually a week later before they are first seen in the open pine woods. For a month then they are of common occurrence on the island. The earliest date of arrival for this species in the spring is March 26 (1937); the latest date of departure in the fall is November 1 (1935).

Hylocichla guttata faxoni Bangs and Penard
Eastern Hermit Thrush

1935: 1 ♀, Saucier, November 14. 1936: 3 ♀, Saucier, January 3, April 2, and 17; 1 ♀, Gulfport, January 18. 1938: 1 ♂, 2 ♀, Saucier, March 24, April 7, November 1; 1 ♂, Deer Island, October 29; 1 ♂, 1 ♀, Gulfport, November 20, December 25. 1939: 3 ♂, 3 ♀, Saucier, January 17, March 7, October 26, November 3, and 6, December 6; 1 ♀, Horn Island, January 21; 3 ♂, 4 ♀, Gulfport, January 22, October 29, November 2, 7, 12, 18, and 19; 1 ♂, 2 ♀, Deer Island, January 31, November 4, December 19. 1940: 2 ♂, 8 ♀, Gulfport, January 12, and 21, February 3, 11, and 25, March 5, 7, and 24, October 27, December 6; 1 ♀,

Cat Island, February 4; 2 ♂, 2 ♀, Deer Island, February 13, March 16, and 23, November 13; 2 ♀, Saucier, February 20, April 11; 3 ♀, Biloxi, March 6, and 15, April 12. 1941: 1 ♂, 1 ♀, Pearlington, February 1; 1 ♂, Saucier, April 9. 1942: 1 ♂, Gulfport, December 21. 1943: 1 ♀, Gulfport, April 20.

The Hermit Thrush is a common winter resident on the Mississippi coast, appearing in the fall the last week in October, and lingering in the spring until almost the end of April. It occurs both on the mainland and on all the islands, and is apt to be seen almost anywhere, being noted as often about thickets in the open pine woods as in the thick woods bordering the streams. The earliest date of arrival in the fall is October 21 (1941); the latest date of departure in the spring is April 22 (1943).

The series listed above was taken with the object of determining the presence on the Gulf coast during the winter of any of the currently recognized western races. All were found to be typical of the eastern race, *faxoni,* with the exception of a female collected at Gulfport on January 21, 1940. This specimen was identified by Alden H. Miller as *faxomi,* but as intermediate in characters and closely approaching *guttata.*

Hylocichla ustulata swainsoni (Tschudi)
Olive-backed Thrush

1935: 1 ♂, Saucier, September 24. 1936: 1 ♂, 1 ♀, Gulfport, April 25, May 6. 1937: 1 ♀, Horn Island, May 12; 1 ♀, Gulfport, September 21. 1939: 2 ♂, 3 ♀, Gulfport, May 16, October 8, 18, and 29; 1 ♀, Saucier, September 20; 2 ♀, Cat Island, September 21, October 3. 1940: 1 ♂, Cat Island, May 5; 2 ♂, 3 ♀, Deer Island, May 10, 16, and 21, September 26. 1941: 1 ♂, 2 ♀, Deer Island, May 15, October 1 and 11; 1 ♀, Gulfport, September 22. 1942: 1 ♂, 2 ♀, Deer Island, May 7 and 13, September 20; 1 ♀, Gulfport, May 9.

The Olive-backed Thrush is a common transient on the Mississippi coast, and is equally numerous both in the spring and in the fall. On the mainland it was found only in the woods bordering the streams, while on the islands the small flocks noted were in the thickets and underbrush at the edge of the open pine woods. It was possibly most common early in May and again early in October. Extreme dates of occurrence were April 25 (1936) and May 21 (1940), and September 20 (1942) and October 29 (1939). In each case the dates represent specimens taken that were typical of the eastern race.

Hylocichla ustulata almae Oberholser
Western Olive-backed Thrush

1935: 1 ♂, Saucier, December 2. 1 ♀, Gulfport, October 11. 1937: 1 ♂, Gulfport, May 2. 1939: 1 ♀, Saucier, May 11; 1 ♂, Gulfport, October 15. 1940: 1 ♂, Gulfport, May 11; 1 ♂, Deer Island, September 21. 1941: 1 ♀, Gulfport,

May 9; 1 ♂, 2 ♀, Deer Island, May 10, October 21. 1943: 2 ♂, Deer Island, April 19 and 24; 2 ♀, Gulfport, May 3 and 11.

The small series listed above was compared with breeding specimens of *almae* from the Rocky Mountains and was found to be typical. Although recognized by few taxonomists since it was originally described, *almae* is unquestionably a valid race. It is distinctly grayer and less brownish above than is *swainsoni*. This subspecies apparently crosses the Gulf of Mexico regularly in its migrations to and from its winter quarters, and hence occurs as a fairly common transient on the Gulf coast.

Hylocichla minima minima (Lafresnaye)
Gray-cheeked Thrush

1935: 1 ♂, 1 ♀, Saucier, September 23, October 2. 1936: 1 ♂, Gulfport, May 6; 1 ♀, Deer Island, May 29; 1 ♂, 1 ♀, Saucier, September 17 and 28. 1937: 1 ♂, 2 ♀, Gulfport, April 22, and 29, May 13; 1 ♂, Saucier, September 23. 1938: 2 ♂, Gulfport, April 27, September 25. 1939: 1 ♂, 3 ♀, Gulfport, April 20, September 24, October 2 and 27; 1 ♂, Deer Island, April 21; 2 ♂, Saucier, September 20 and 26. 1940: 5 ♂, Gulfport, April 24, 27, and 28, May 11 and 14; 1 ♂, 1 ♀, Deer Island, April 26, September 26; 1 ♂, Ship Island, May 1; 1 ♀, Cat Island, May 5; 1 ♂, Biloxi, September 28. 1941: 1 ♂, Gulfport, May 8; 1 ♂, 1 ♀, Deer Island, May 10 and 31. 1942: 2 ♀, Deer Island, May 7 and 13; 1 ♂, Biloxi, May 14. 1943: 1 ♂, Deer Island, April 12; 1 ♂, Gulfport, April 20.

The status of this species is much the same as that of the Olive-backed Thrush, except that it is rarely seen in flocks. Uusually one or two birds are found in woods bordering a stream on the mainland, or, if seen on one of the islands, about a thicket in the open pine woods. It is a common transient both in the spring and in the fall, and was recorded almost daily during the latter part of April and early in May, and again late in September and the first half of October. Extreme dates of occurrence in the spring are April 12 (1943) and May 31 (1941) (specimens collected on Deer Island on each of these dates), and in the fall, September 12 (1942) (Deer Island) and October 27 (1939) (Gulfport).

Hylocichla minima bicknelli Ridgway
Bicknell Thrush

1936: 1 ♂, Saucier, September 23. 1939: 1 ♀, Deer Island, October 13.

This southern race of the Gray-cheeked Thrush is apparently an extremely scarce fall transient on the Gulf coast; for although I frequently collected a bird that appeared rather small in the field, only the two specimens listed above were found to represent *bicknelli*.

HYLOCICHLA FUSCESCENS FUSCESCENS (STEPHENS)
VEERY

1936: 1 ♂, Saucier, May 5; 2 ♀, Gulfport, May 6 and 7. 1937: 1 ♂, 1 ♀, Gulfport, May 3, September 21; 1 ♂, Deer Island, September 13. 1938: 1 ♀, Saucier, May 3; 1 ♀, Deer Island, May 6; 1 ♂, Gulfport, May 8. 1939: 1 ♂, Gulfport, September 15; 1 ♂, Cat Island, September 21; 1 ♂, Saucier, October 5. 1940: 1 ♂, 2 ♀, Deer Island, April 26, May 10 and 13; 1 ♂, Ship Island, May 1; 1 ♀, Cat Island, May 5; 1 ♂, 1 ♀, Gulfport, May 6 and 12. 1941: 2 ♂, 1 ♀, Deer Island, May 7, and 10, October 1. 1942: 2 ♂, Gulfport, April 22, September 1; 2 ♂, 1 ♀, Deer Island, May 8 and 13, September 12. 1943: 1 ♂, 1 ♀, Gulfport, April 25, May 11; 1 ♂, 1 ♀, Deer Island, April 24, May 12.

The Veery, so far as its status on the Mississippi coast is concerned, has much in common with the two preceding species of *Hylocichla*. It is a common transient both in the spring and in the fall, and although frequently seen alone about thickets or underbrush, it is just as often found feeding with other thrushes. It likewise appears at approximately the same time in the spring and in the fall, and is usually recorded almost daily late in April and early in May, and again throughout most of September. Only at infrequent intervals was it noted in flocks. On the mainland it invariably occurs in the dense woods bordering the streams, but on the islands it is not uncommon to find it about the palmetto thickets in the open pine woods. Extreme dates of occurrence in the spring are April 20 (1939) (Gulfport) and May 14 (1942) (Deer Island), and in the fall, August 30 (1938) (Cat Island), and October 16 (1939) (Gulfport.)

HYLOCICHLA FUSCESCENS SALICICOLA RIDGWAY
WILLOW THRUSH

1935: 1 ♀, Saucier, September 24. 1936: 2 ♂, Deer Island, August 31; 2 ♂, Gulfport, September 19, October 4. 1937: 1 ♂, 1 ♀, Gulfport, September 14 and 16. 1938: 1 ♂, Cat Island, August 30; 1 ♂, Gulfport, September 25. 1939: 2 ♂, Gulfport, April 20, October 11; 1 ♂, Deer Island, September 27. 1940: 2 ♂, 1 ♀, Gulfport, April 24, September 23 and 29; 1 ♂, Deer Island, September 12.

On the basis of the specimens listed above this western race of the Veery appears to be a rather scarce transient in the spring, but a fairly common fall transient on the Mississippi coast.

HYLOCICHLA FUSCESCENS FULIGINOSA HOWE
NEWFOUNDLAND VEERY

1936: 1 ♀, Saucier, September 15. 1939: 1 ♂, Gulfport, September 24.

This Newfoundland race of the Veery is in my opinion, a valid subspecies. It most closely resembles *salicicola*, but although the upper parts are perceptibly darker than in *fuscescens*, there is also a very evident ruddy tinge on the back that readily separates it from *salicicola*. Since this race

is known to occur during the summer months only in Newfoundland, where it is scarce, it is probably an uncommon tarnsient anywhere south of its breeding range.

SIALIA SIALIS SIALIS (LINNAEUS)
EASTERN BLUEBIRD

1935: 1 ♂, Pascagoula, April 14; 3 ♂, Saucier, May 11, August 15, December 12; 1 ♂, Woolmarket, December 24. 1936: 1 ♂, Saucier, March 8. 1937: 3 ♂, 1 ♀, Saucier, February 10, April 20, May 29; 1 ♂, Cat Island, February 24; 2 ♂, 2 ♀, Horn Island, November 4. 1938: 1 ♂, Saucier, March 25; 1 ♂, Gulfport, November 19. 1939: 1 ♂, 1 ♀, Horn Island, January 21. 1940: 1 ♂, Gulfport, December 25. 1941: 1 ♂, Biloxi, February 26. 1942: 1 ♀, Biloxi, February 24; 1 ♀, Gulfport, November 12.

The Bluebird is one of the most characteristic birds of the open pine woods, and is common and of general distribution throughout the year on the mainland. The species is most numerous during the winter months. Birds that bred farther north appear in flocks early in November and remain until February. Oddly enough, there are no records for Deer Island. Conditions there in the open pine woods are much the same as on the mainland, but it was never found nesting on the island, nor was it seen there during the winter months. Finding the species resident on Horn Island was therefore unexpected. My first visit to Horn Island was on August 21, 1936, and on that day a flock of six Bluebirds, four of them fully grown young of the year, were seen at the western end of the island. That these birds apparently never cross the 16 miles of open water to the mainland appears rather evident from the fact that on November 4, 1937, and again on January 21, 1939, scattered pairs were observed on the island in the open pine woods. I have one record for Cat Island, a flock of eight birds seen on February 12, 1937. A characteristic breeding record is that of a nest found at Saucier on March 25, 1938, that held four slightly incubated eggs. It was 5 feet from the ground in a natural cavity in a dead pine at the side of a road.

Family SYLVIIDAE

POLIOPTILA CAERULEA CAERULEA (LINNAEUS)
BLUE-GRAY GNATCATCHER

1936: 1 ♀, Gulfport, March 11; 1 ♂, 1 ♀, Deer Island, April 18, November 24. 1937: 1 ♂, Gulfport, April 21; 1 ♀, Deer Island, December 13. 1938: 1 ♂, Gulfport, March 12. 1939: 1 ♂, Woolmarket, November 10; 1 ♀, Cat Island, December 13. 1940: 1 ♂, Biloxi, March 21; 2 ♀, Gulfport, March 24, December 11. 1944: 1 ♂, Deer Island, October 13.

The Blue-gray Gnatcatcher is a fairly common summer resident on the Mississippi coast. It usually appears in the spring shortly after the middle

of March and is rarely seen in the fall after the middle of October. It breeds as commonly on the islands as on the mainland, the presence of live oaks in which to nest apparently being the one factor that influences its distribution during the summer months. Only rarely is one of these birds seen in the winter. My few definite records are as follows: Deer Island, December 13, 1937; Petit Bois Island, December 21, 1937; Cat Island, December 13, 1940; Gulfport, December 11, 1940. It is possible also that single birds noted at Deer Island on November 24, 1936; at Horn Island on November 4, 1937; and, at Woolmarket on November 10, 1939, represented wintering individuals, for otherwise my latest fall record is October 25, 1938. The earliest date of arrival in the spring is March 11 (1936); the average date is March 20.

Regulus satrapa satrapa Lichtenstein
Eastern Golden-crowned Kinglet

1935: 1 ♂, Gulfport, October 25. 1936: 1 ♀, Saucier, January 17; 1 ♂, Gulfport, March 25. 1937: 1 ♂, Gulfport, October 20; 1 ♀, Horn Island, November 4. 1939: 1 ♀, Horn Island, January 21; 1 ♀, Cat Island, November 1. 1940: 1 ♀, Biloxi, March 21. 1942: 1 ♂, 1 ♀, Deer Island, March 7 and 26; 2 ♀, Cat Island, March 16; 1 ♂, Saucier, March 19. 1943: 1 ♂, Deer Island, January 1.

The Golden-crowned Kinglet is a common winter resident on the Mississippi coast. It appears in the fall the latter part of October, and usually disappears in the spring shortly after the middle of March. Like so many of the birds that winter commonly in the southern part of the State, it consistently avoids the open pine woods on the mainland; the small flocks that are seen are almost invariably in the thick woods bordering the streams. On the islands, however, it feeds impartially in the live oaks and in the pines, and is frequently seen during the winter months with flocks of Pine Warblers. The earliest date of arrival in the fall is October 20 (1937); the latest date of departure in the spring is March 27 (1942).

Regulus calendula calendula (Linnaeus)
Eastern Ruby-crowned Kinglet

1935: 1 ♀, Deer Island, September 28. 1936: 1 ♂, 1 ♀, Gulfport, March 25, April 19; 1 ♂, Deer Island, September 30. 1940: 1 ♂, Gulfport, December 25. 1941: 1 ♂, 1 ♀, Deer Island, February 13, October 7; 1 ♀, Gulfport, March 30. 1942: 1 ♂, 1 ♀, Deer Island, March 14, September 22. 1943: 1 ♀, Deer Island, March 2; 1 ♂, 1 ♀, Gulfport, April 10 and 25; 1 ♂, 2 ♀, Biloxi, April 14, 21, and 27; 1 ♀, Saucier, April 23.

The Ruby-crowned Kinglet is also a common winter resident on the Mississippi coast; it occurs both on the mainland and on all the islands.

Unlike the preceding species, it is seldom seen in flocks. Single birds, rarely two or three together, are found practically anywhere there are thickets or underbrush in which it can feed. In the fall, an occasional bird appears late in September, but it is usually the end of October before many are seen. They are then plentiful until the following April, at which time they gradually become scarce and are invariably gone before the end of the month. The earliest date of arrival in the fall is September 22 (1942); the latest date of departure in the spring is April 27 (1943).

Family MOTACILLIDAE

ANTHUS SPINOLETTA RUBESCENS (TUNSTALL)

AMERICAN PIPIT

1935: 1 ♂, Saucier, December 11; 1 ♂, Gulfport, December 28. 1936: 1 ♂, Gulfport, February 14; 1 ♀, Deer Island, February 28; 1 ♀, Saucier, November 6. 1937: 1 ♂, Gulfport, January 8. 1938: 1 ♀, Gulfport, January 23; 1 ♂, Deer Island, December 1. 1939: 1 ♂, Gulfport, February 11; 1 ♂, Bay St. Louis, February 18; 1 ♂, Deer Island, March 4. 1940: 1 ♀, Saucier, January 24; 1 ♂, Gulfport, February 11; 1 ♂, 1 ♀, Deer Island, November 21. 1941: 1 ♀, Pearlington, February 1; 1 ♂, 1 ♀, Deer Island, March 8 and 26; 1 ♀, Saucier, May 2. 1942: 1 ♀, Deer Island, January 15; 1 ♀, Gulfport, March 28. 1943: 1 ♀, Lyman, May 5.

The Pipit is a fairly common winter resident on the Mississippi coast where small restless flocks are found throughout the winter months both on the mainland and on the islands. Although normally seen in fields and pastures, it was not uncommon to find an occasional small flock feeding with shore birds on the beaches or on a sandbar exposed by the low tide, although they seemed out of place under such condition. The first birds did not usually appear in the fall until the last of October, and several weeks elapsed before they became plentiful. Small flocks were frequently seen until early in March, at which time they invariably became very scarce, and were usually not observed again after the middle of the month. I recorded this species on only three occasions in the spring later than the last of March. In 1939, a bird was seen on Deer Island on April 21; in 1941, three birds were found feeding in a plowed field near Saucier on May 2; and, in 1943, a bird was observed in an open field at Lyman on May 5. In the fall my dates of arrival vary from October 20 (1938) to November 8 (1935).

Family BOMBYCILLIDAE

BOMBYCILLA CEDRORUM VIEILLOT

CEDAR WAXWING

1935: 1 ♀, Saucier, December 12. 1936: 1 ♂, Saucier, January 22. 1937: 1 ♀, Ship Island, May 7; 1 ♂, Horn Island, May 12; 1 ♂, Saucier, May 29. 1939:

1 ♂, Deer Island, January 26; 1 ♀, Gulfport, February 26. 1940: 1 ♀, Gulfport, December 3. 1941: 1 ♀, Gulfport, December 17. 1942: 1 ♀, Gulfport, February 22; 1 ♂, Biloxi, March 11; 1 ♀, Saucier, November 16. 1943: 1 ♀, Deer Island, April 16.

Of all the species that are considered winter residents on the Mississippi coast, the Cedar Waxwing is unquestionably the most erratic. Although usually common, the species was rather scarce some years, though on one or two occasions it was almost abundant. Arrival in the fall varied from the middle of October to the middle of December, and while in the spring it is usually present until early in May, there were years when it disappeared in March or early in April. It was always present in mid-winter at which time it occurred both on the mainland and on the islands. The average flock contained from ten to thirty individuals, although on one occasion (February 22, 1939) approximately eighty of these birds were seen on Deer Island feeding in a large chinaberry tree. The earliest date of arrival in the fall is October 12 (1936); the latest date of departure in the spring is May 29 (1937).

Family LANIIDAE

LANIUS LUDOVICIANUS LUDOVICIANUS LINNAEUS
LOGGERHEAD SHRIKE

1935: 2 ♂, 1 ♀, Saucier, June 6, September 25, October 15; 1 ♂, Deer Island, November 8. 1936: 2 ♀, Saucier, September 18, December 11; 1 ♀, Horn Island, August 21. 1937: 1 ♀, Cat Island, February 12. 1938: 1 ♂ im., Deer Island, July 8. 1940: 1 ♂, Deer Island, November 21. 1941: 1 ♂ im., 1 ♀, Deer Island, January 18, May 15. 1942: 1 ♀, Saucier, October 30; 1 ♂, Deer Island, November 13; 1 ♀, Biloxi, December 22.

The Loggerhead Shrike is a common resident species on the Mississippi coast, occurring both on the mainland and on all the islands. Preferring as it does the more open country, the species is usually found about fields or pastures, and regardless of season, is never absent from the telephone wires at the side of the roads. Breeding activities begin rather early in the spring for a nest found near Saucier on March 6, 1936, twenty feet from the ground at the outer end of a longleaf pine in open pine woods, was already well along toward completion.

LANIUS LUDOVICIANUS MIGRANS PALMER
MIGRANT SHRIKE

1936: 1 ♂, 1 ♀, Saucier, October 6, November 16. 1937: 1 ♂, Saucier, November 26. 1938: 1 ♀, Gulfport, November 20. 1939: 1 ♂, Saucier, November 15; 1 ♂, Cat Island, December 13. 1940: 1 ♀, Biloxi, November 9.

On the basis of actual specimens taken, this northern race is apparently a regular yet somewhat scarce winter resident in southern Mississippi. Its

distinctly paler upper parts readily distinguish it in the field from *ludovicianus*.

Family STURNIDAE

STURNUS VULGARIS VULGARIS LINNAEUS
STARLING

1935: 1 ♂, Gulfport, November 2. 1936: 2 ♂, Gulfport, October 31, December 24. 1938: 1 ♂, Gulfport, December 17. 1939: 1 ♀, Saucier, November 14. 1943: 3 ♂, 2 ♀, all fledglings, Lyman, April 17.

Until the spring of 1943 the status of the Starling on the Mississippi coast was that of a fairly common winter resident. The first small flocks appeared late in October or early in November, and were present from then until the following March. Usually they were seen feeding in fields or pastures, although during the early winter months they frequently fed on black gum berries in woods bordering the streams. On April 17, 1943, while at Lyman, 10 miles north of Gulfport, a Starling was seen leaving a cavity near the top of a telephone pole carrying what appeared to be an excrement sac. Investigation revealed a nest that held five almost fully fledged young so well grown that they would undoubtedly have flown within a day or two. This record possibly marks the southern-most point where the species is known to nest in the southeastern states.

Family VIREONIDAE

VIREO GRISEUS GRISEUS (BODDAERT)
SOUTHERN WHITE-EYED VIREO

1935: 1 ♀, Saucier, June 7. 1936: 1 ♂, Gulfport, May 10. 1937: 1 ♂, Saucier, April 19; 1 ♀, Deer Island, April 30. 1938: 1 ♂, Gulfport, March 23. 1939: 1 ♂, Woolmarket, March 7; 1 ♂, Gulfport, June 25. 1940: 1 ♀, Ship Island, April 10; 1 ♂, Deer Island, April 13. 1941: 1 ♂, Gulfport, May 4. 1942: 4 ♂, 3 ♀, Gulfport, February 21, March 22, April 25 and 26, May 3, September 5: 3 ♂, Biloxi, April 30, September 2, November 7; 1 ♀, Saucier, April 29. 1943: 6 ♂, 1 ♀, Gulfport, March 7 and 16, April 11, 18, 22 and 25; 2 ♂, Biloxi, February 22, March 12; 2 ♂, Saucier, April 13.

The White-eyed Vireo is a common summer resident on the Mississippi coast, but is largely limited in its distribution to woods bordering the streams on the mainland. On the outer islands, it occurs as a transient only; whereas on Deer Island there is one place where a pair of these birds nest each year. It was rather interesting to me to note only the one pair year after year. Since broods of young were always reared, there is no obvious reason why this species does not become more thoroughly

established as a breeding bird. On the mainland the species was found throughout the summer months wherever there were thickets or underbrush. It usually appeared in the spring shortly after the middle of March, and was rarely seen in the fall after the latter part of October. On but two occasions was this vireo known to winter on the coast. One was seen at Gulfport on February 21, 1942, feeding with a flock of Myrtle Warblers in a woodland bordering a stream, and was almost certainly an individual that had wintered there. On January 21, 1943, another was seen near Biloxi. The earliest date of arrival for this species in the spring is March 7 (1939); the latest date of departure in the fall is November 7 (1942). Average dates of arrival and departure are March 16 and October 23, respectively.

Vireo griseus noveboracensis (Gmelin)
Northern White-eyed Vireo

1935: 2 ♂, Saucier, October 5 and 11. 1936: 1 ♂, Saucier, March 16. 1937: 1 ♂, Gulfport, October 15; 1 ♀, Saucier, October 19. 1938: 1 ♂, Horn Island, March 20; 2 ♀, Gulfport, October 19 and 23. 1939: 1 ♀, Deer Island, September 27; 1 ♂, Cat Island, October 3; 1 ♂, Gulfport, October 22. 1940: 2 ♂, Deer Island, March 16, September 26; 2 ♂, Gulfport, March 26, October 13. 1941: 1 ♂, 2 ♀, Deer Island, April 1, September 20, October 16; 1 ♀, Gulfport, October 19. 1942: 1 ♀, Deer Island, August 31; 3 ♀, Gulfport, September 3, 8, and 17. 1943: 1 ♂, Biloxi, August 25.

In view of the diversity of opinion among taxonomists concerning the advisability of recognizing a northern race of *Vireo griseus,* a careful study was made of the White-eyed Vireos of the Mississippi Gulf coast. When the series listed of this and the previous race was examined critically, it became at once apparent that two well-marked races were represented. Although the validity of *noveboracensis* has been questioned, it was found to be quite distinct from *griseus.* The flanks and sides are much deeper yellow in color, and the upper parts are a clear uniform green that shows no trace of the gray wash characteristic of *griseus.* No difficulty was experienced in separating the breeding birds from transients on the basis of these characters. In connection with this study, breeding birds were examined from throughout the range of *Vireo griseus* in the southeastern United States. The southern form, *griseus,* was found to have a very restricted range north of the Florida Peninsula. On the Gulf coast, it is limited to a narrow strip extending inland approximately 30 miles; the birds breeding north of this line are *noveboracensis.* On the Mississippi coast, the northern race proved to be a common transient both in the spring and in the fall, occurring at that time both on the mainland and on all the islands.

Vireo bellii bellii Audubon
Bell Vireo

1939: 1 ♀, Deer Island, September 18.

The specimen listed above is the only record for this species on the Mississippi coast.

Vireo flavifrons Vieillot
Yellow-throated Vireo

1936: 2 ♂, 1 ♀ im., Gulfport, March 18, August 5. 1938: 1 ♂, 1 ♀, Gulfport, March 17, August 28. 1939: 1 ♀, Cat Island, October 3; 1 ♀, Gulfport, October 22. 1940: 1 ♂, Biloxi, March 21; 1 ♀, Ship Island, April 10; 1 ♂, Deer Island, April 13. 1941: 2 ♂, 1 ♀, Deer Island, March 21, May 7, July 30; 1 ♂, Gulfport, May 24. 1942: 1 ♂, Deer Island, March 21.

The Yellow-throated Vireo is a common transient on the Mississippi coast, but is an extremely scarce summer resident there. Until 1941 it was never noted late in spring or early in summer. The species apparently nested at two widely separated places on the mainland. A singing male seen in woods bordering a stream near Gulfport on May 24 was collected and was found to be unquestionably a breeding bird, although an attempt to find a nest or young proved futile. A month later, on June 23, two of these birds were seen in woods bordering the Pearl River near Pearlington, and although again no nest was found, there can be little doubt that the two birds were breeding. In the spring this vireo usually appears shortly after the middle of March and is frequently observed until early in May, both on the mainland and on the islands. Extreme dates of occurrence are March 15 (1940) and May 7 (1941) (Deer Island). The fall migration begins rather early for a single bird was seen on Deer Island on July 30 (1941), and there are several records for August (Gulfport, August 5, 1936, and August 28, 1938; Cat Island, August 30, 1938). However, the species is most frequently noted during September and early October. The latest date of departure in the fall is October 22 (1939).

Vireo solitarius solitarius (Wilson)
Blue-headed Vireo

1935: 2 ♂, Gulfport, October 20 and 26; 1 ♂, 1 ♀, Saucier, November 4, December 17; 1 ♂, Pass Christian, November 30; 1 ♀, Deer Island, December 30. 1936: 1 ♂, 1 ♀, Saucier, January 4, February 18; 2 ♂, 1 ♀, Gulfport, March 1, October 28, November 26; 1 ♂, Woolmarket, December 10. 1937: 1 ♂, 1 ♀, Deer Island, April 10, November 13; 1 ♂, Saucier, November 2. 1938: 3 ♂, Gulfport, April 8 and 15, December 25; 1 ♂, Saucier, November 29. 1939: 1 ♀, Saucier, February 4; 1 ♀, Gulfport, October 22; 1 ♀, Cat Island, November 1.

1941: 4 ♂, 3 ♀, Gulfport, January 19, March 2, 5, 16, 23 and 30, December 14; 2 ♀, Biloxi, March 12, December 20. 1942: 1 ♀, Gulfport, November 6. 1943: 1 ♂, 1 ♀, Gulfport, January 10, March 6; 1 ♂, Biloxi, March 21.

The Blue-headed Vireo is a fairly common winter resident on the Mississippi coast where it usually arrives late in October and seldom lingers in the spring later than the first week in April. On the mainland an occasional bird is seen feeding with Pine Warblers in the open pine woods, but ordinarily a decided preference is shown for the deciduous hardwoods bordering the streams. It apparently rarely reaches the islands for it was seldom observed there. The few records are as follows: Deer Island—December 30, 1935, April 10 and November 13, 1937, and November 13, 1940; Cat Island—November 1, 1939. The earliest date of arrival for the species in the fall is October 20 (1935); the latest date of departure in the spring is April 15 (1938).

Vireo solitarius alticola Brewster
Mountain Vireo

1936: 1 ♂, Saucier, January 22. 1939: 3 ♂, Gulfport, January 25 and 29, March 12. 1940: 1 ♀, Gulfport, January 19. 1941: 1 ♀, Gulfport, March 16. 1942: 1 ♂, Biloxi, December 12; 1 ♂, Gulfport, December 31. 1943: 3 ♀, Gulfport, January 14, February 21 and 23; 1 ♂, 1 ♀, Biloxi, January 21, March 12.

Although this Southern Appalachian race is alleged to be restricted to the Atlantic coast during the winter months, it is apparently a fairly common winter resident on the Gulf coast. On the basis of actual specimens taken, the race is present only from the last of December until the middle of March, arriving much later in the fall and departing a month earlier in the spring than *solitarius*. This is a well-marked race, easily recognized by its large bill and bluish-gray rather than olive-green upper parts.

Vireo olivaceus (Linnaeus)
Red-eyed Vireo

1935: 2 ♂, Saucier, May 10, October 28. 1936: 2 ♂, Saucier, March 27, April 6; 1 ♂ im., Horn Island, August 21. 1938: 1 ♂, Saucier, March 30; 1 ♀, Deer Island, August 25. 1939: 1 ♀, Gulfport, May 14; 1 ♀, Deer Island, September 18; 2 ♀, Saucier, October 30, November 17. 1940: 2 ♂, Deer Island, May 16 and 21; 1 ♂ im., Gulfport, July 14. 1941: 2 ♂, 1 ♀, Deer Island, March 21, May 31, August 9; 1 ♀, Gulfport, March 23. 1942: 1 ♂, Cat Island, March 16; 2 ♂, Deer Island, May 14, August 24; 1 ♂ im., Gulfport, July 18. 1943: 1 ♀, Deer Island, August 26.

Although a common summer resident in the southern part of the State, the Red-eyed Vireo apparently has no liking for the coast. Scattered pairs nest in woods bordering the streams at Saucier, but at

localitiees only a few miles south of Saucier, this vireo is seldom seen during the summer months. In the spring it usually appears the latter part of March, and within a week is fairly plentiful. Since it does not nest on Deer Island, it was possible to study its movements there in far more detail than on the mainland, and some interesting facts relative to its presence on the coast during the spring and fall were ascertained. Each year it was noted abundantly on the island throughout most of May. Only an occasional bird lingered later than the middle of that month. In 1941, an individual was recorded as late as May 31, some time after all other transients had disappeared. In the fall, the species always reappeared during August, and although normally seen for the first time the latter part of the month, it was noted in 1941 as early as August 9. That this southward movement late in summer is characteristic of this species was further emphasized by similar observations on the other islands. A single Red-eyed Vireo was seen on Horn Island on August 21, 1936, feeding with warblers at the edge of the open pine woods; and on Cat Island, on August 30, 1938, several of these birds were found feeding in the live oaks there. On the mainland this species is plentiful in September and during the first three weeks of October; the average date of departure in the fall is October 28. The earliest date of arrival in the spring is March 16 (1942) (Cat Island); the latest date of departure in the fall is November 17 (1939) (Saucier). The November record (two birds, of which one was collected, were seen that day feeding with a flock of Golden-crowned Kinglets), is apparently three weeks later than the latest previous record anywhere in the United States.

Vireo philadelphicus (Cassin)
Philadelphia Vireo

1935: 1 ♂, Deer Island, October 7. 1936: 2 ♀, Gulfport, September 19 and 26; 1 ♀, Deer Island, September 30. 1939: 1 ♀, Gulfport, October 2; 1 ♂, Saucier, October 5; 1 ♂, Deer Island, October 13. 1941: 1 ♀, Deer Island, May 7.

The Philadelphia Vireo is a rather scarce transient on the Mississippi coast, where it is of regular occurrence in the fall, but where it is apparently accidental in the spring. My one record for the spring migration is that of a single bird seen on Deer Island on May 7, 1941, feeding with warblers in a live oak at the edge of the open pine woods. In the fall an occasional bird can be seen in woods bordering the streams; but years when more than two or three are recorded are exceptional. Extreme dates of occurence are Sepetmber 19 (1936) and October 13 (1939).

Family COMPSOTHLYPIDAE

MNIOTILTA VARIA (LINNAEUS)
BLACK AND WHITE WARBLER

1936: 1 ♂, Woolmarket, March 17; 1 ♂, 1 ♀ im, Saucier, April 9, July 8; 1 ♀, Gulfport, April 22. 1937: 3 ♀, Gulfport, May 9, and 10, July 19. 1938: 1 ♂, 1 ♀ im., Gulfport, March 17, July 16; 1 ♂, Deer Island, May 6. 1939: 1 ♂, Deer Island, March 4; 1 ♂, 2 ♀, Gulfport, May 8, October 18, November 19. 1940: 1 ♀, Biloxi, March 8; 1 ♀, Gulfport, December 8. 1941: 1 ♀, Gulfport, July 26; 1 ♀, Deer Island, July 30. 1942: 2 ♂, Gulfport, March 14 and 15; 1 ♂, 1 ♀, Deer Island, May 17, August 10. 1943: 1 ♂, 1 ♀, Deer Island, March 14, May 8.

The Black and White Warbler is a common transient both on the mainland and on the islands where it is equally numerous in the spring and in the fall. It is one of the first migrants to arrive in the spring, often appearing early in March, and is usually plentiful by the middle of the month. Likewise the species is one of the first to reappear in the fall; migrants invariably arrive in July, sometimes by the middle of the month. It is possibly most plentiful late in March and early in April, and again throughout August and most of September. Extreme dates of occurence in the spring are March 4 (1939) and May 14 (1942), and in the fall, July 8 (1936) and November 19 (1939). There is one record for the winter months, a female seen on December 8, 1940, in a woodland bordering a stream near Gulfport.

PROTONOTARIA CITREA (BODDAERT)
PROTHONOTARY WARBLER

1936: 1 ♂, 1 ♀, Gulfport, March 18, July 29. 1937: 1 ♀, Deer Island, April 21. 1938: 1 ♂, Ship Island, April 1; 1 ♂ im., Gulfport, August 28. 1939: 1 ♂, Deer Island, September 18. 1940: 1 ♂, Gulfport, September 23; 1 ♂, 1 ♀, Deer Island, September 26 and 27. 1941: 1 ♀, Deer Island, March 21. 1942: 1 ♂, Gulfport, March 20; 1 ♀, im., Deer Island, August 15.

The Prothonotary Warbler is another species that breeds commonly in the southern part of the State, but one which consistently avoids the vicinity of the coast except in migration. It was found nesting at Saucier, and was seen early in June along the Biloxi River near Woolmarket, but otherwise was recorded only as a transient. The species appears in the spring shortly after the middle of March, and is usually fairly plentiful by the first of April. On Deer Island it was noted as early as March 21 (1941), and at frequent intervals throughout all of April and rarely early in May. A rather late record for the spring migration is that of a single bird seen on Deer Island on May 6, 1938; the species normally has young in the nest by that date. The southward movement

in the fall begins early. I have one record for Deer Island for July (July 30, 1941), but it was invariably present there after the middle of August. The species was likewise observed on Horn Island on August 21, 1936, and on Cat Island on August 30, 1938. By the middle of September this species usually becomes rather scarce on the mainland at which time only an occasional bird is seen. The earliest date of arrival in the spring is March 18 (1936); the latest date of departure in the fall is September 27 (1940).

Limnothlypis swainsonii (Audubon)
Swainson Warbler

1941: 1 ♂, 2 ♀, Gulfport, August 19, October 4 and 6. 1942: 1 ♀ im., Gulfport, August 8. 1943: 1 ♀, Deer Island, April 19.

Although the Swainson Warbler breeds within 50 miles of the coast, and is fairly common during the summer months in the northern part of the State, it is an extremely scarce transient on the coast itself. In addition to the specimens listed above I have only one record, a bird seen on Deer Island on August 26, 1943.

Helmitheros vermivorus (Gmelin)
Worm-eating Warbler

1936: 1 ♀, Deer Island, July 31; 2 ♂, Gulfport, August 1 and 22. 1937: 1 ♂, Deer Island, April 10; 3 ♂, 1 ♀, Gulfport, April 18 and 23, September 2 and 18. 1938: 1 ♀, Gulfport, April 13; 1 ♀, Saucier, August 24. 1939: 1 ♀, Cat Island, September 21. 1940: 3 ♂, Biloxi, April 12 and 25, September 28; 2 ♀, Deer Island, April 13 and 30; 1 ♂, 1 ♀, Gulfport, April 14, May 3. 1941: 1 ♀, Biloxi, April 5; 1 ♀, Gulfport, August 24. 1942: 1 ♂ im., Gulfport, August 5; 1 ♂, 1 ♀, Deer Island, August 10, September 22; 1 ♀ im., Biloxi, August 26.

The Worm-eating Warbler is a fairly common transient on the Mississippi coast where it occurs both on the mainland and on the islands. It is rather irregular in its appearance, especially in the spring. There have been years, as in 1938 and 1942, when very few of these warblers were seen; whereas other years, notably 1940 and 1943, they were observed almost daily throughout April. In the fall the first birds usually appeared early in August, and almost without exception they were fairly plentiful by the end of the month. The species was possibly most numerous late in April and again early in September. Extreme dates of occurrence in the spring are April 5 (1941) and May 7 (1941), and in the fall, July 31 (1936) and October 6 (1941).

Vermivora chrysoptera (Linnaeus)
Golden-winged Warbler

1936: 1 ♂, Gulfport, September 7; 1 ♀, Saucier, September 16. 1937: 1 ♂ im., Woolmarket, August 27; 1 ♂, 1 ♀, Deer Island, August 28, September 1. 1938: 1 ♂, Gulfport, April 10. 1941: 2 ♂, 1 ♀, Gulfport, August 17 and 19, October 8; 1 ♀, Deer Island, August 21. 1942: 2 ♂, 2 ♀, Gulfport, August 4, 13, and 30, September 9; 1 ♂, Deer Island, September 22. 1943: 1 ♂, Gulfport, April 18.

The Golden-winged Warbler is a rather erratic transient on the Mississippi coast. It is always scarce in the spring, and although one or two were usually seen each April, there were years when none was noted. Likewise, in the fall, the species was scarce some years and plentiful others. The first arrivals appear at widely varying dates from late in July until early in September. Actually the one interval in the year when it was always recorded was the latter part of August and the first half of September. Although observed most frequently in woods bordering the streams on the mainland, it was often seen on Deer Island, feeding in the live oaks with other warblers. I have no records for the outer islands. Extreme dates of occurrence in the spring are April 10 (1938) and April 24 (1943), and in the fall July 28 (1941) and October 8 (1941).

Vermivora pinus (Linnaeus)
Blue-winged Warbler

1936: 1 ♂, Saucier, April 8; 1 ♂, Gulfport, September 7; 1 ♂, Woolmarket, September 25. 1937: 1 ♂, Gulfport, March 27; 1 ♀, Woolmarket, August 27. 1938: 1 ♂, Gulfport, April 10; 1 ♀, Deer Island, May 6. 1940: 1 ♂, 1 ♀, Deer Island, April 13 and 26; 1 ♀, Biloxi, April 25. 1941: 2 ♂, Gulfport, April 5, September 21. 1942: 1 ♂, Cat Island, March 29; 1 ♀, Gulfport, August 23; 2 ♀, Deer Island, September 4 and 26. 1944: 1 ♂, Deer Island, October 13.

The Blue-winged Warbler is a fairly common transient on the Mississippi coast, although like so many of the warblers its numbers are apt to vary from year to year. There was an occasional spring when relatively few were seen; usually it is even less plentiful than in the fall. Nevertheless, there were years, notably in 1942, when it was frequently observed throughout September. Although there are numerous records for Deer Island, the species apparently misses the outer islands, and hence was noted there only once (Cat Island, March 29, 1942). Extreme dates of occurrence in the spring are March 27 (1937) and May 6 (1938), and in the fall, August 23 (1942) and October 13 (1944).

Vermivora bachmanii (Audubon)
Bachman Warbler

1941: 1 ♂, Deer Island, March 21.

The specimen listed above is my one record for the occurrence of this species on the Mississippi coast. It was feeding with Parula Warblers in underbrush fringing a stretch of open pine woods where it seemed rather out of place in such a situation. Wells W. Cooke (1904) lists a specimen taken at Bay St. Louis on March 26, 1902.

Vermivora peregrina (Wilson)
Tennessee Warbler

1935: 2 ♀, Saucier, September 25, October 23. 1936: 2 ♂, Woolmarket, April 7; 1 ♂, 1 ♀, Gulfport, April 11, September 19; 1 ♂ im., 1 ♀, Saucier, September 18, October 12. 1937: 2 ♂, Gulfport, September 18, October 30; 3 ♂, Deer Island, November 13. 1938: 1 ♂, Deer Island, November 2. 1939: 2 ♀, Cat Island, September 21, October 3; 2 ♀, Deer Island, October 13, November 4; 1 ♀, Gulfport, November 12. 1940: 3 ♂, 3 ♀, Deer Island, April 20 and 26, September 12 and 26, October 5, November 13; 1 ♂, Gulfport, April 21; 1 ♀, Ship Island, May 1. 1941: 1 ♀, Deer Island, May 7; 1 ♀, Gulfport, September 26. 1942: 1 ♀, Deer Island, May 7; 1 ♀, Gulfport, September 5; 1 ♀, Saucier, September 25.

The Tennessee Warbler is an irregular and not very common spring transient on the Mississippi coast; in the fall it is a common transient. A few birds are seen each spring during April and early in May, but only at infrequent intervals and usually with other warblers. In the fall, however, this species is one of the commonest of the warblers seen on the coast, small flocks appearing shortly after the middle of September (rarely earlier) and being observed almost daily from then until early in November. I found it as numerous on Deer Island as on the mainland, and also noted it at this season of the year on my infrequent trips to the outer islands. Extreme dates of occurrence in the spring are April 7 (1936) and May 7 (1942), and in the fall September 5 (1942) and November 13 (1940).

Vermivora celata celata (Say)
Orange-crowned Warbler

1935: 1 ♂, Deer Island, November 8. 1936: 1 ♂, 1 ♀, Gulfport, January 1, October 28; 2 ♀, Saucier, March 26, December 9. 1937: 1 ♀, Deer Island, January 13; 1 ♂, 1 ♀, Saucier, October 19, December 20; 1 ♀, Gulfport, November 28. 1938: 1 ♀, Deer Island, October 15; 1 ♂, Gulfport, December 25. 1939: 1 ♀, Saucier, October 12. 1940: 2 ♀, Gulfport, January 14, November 20; 1 ♂, Biloxi, March 21. 1941: 1 ♂, Biloxi, March 29; 1 ♀, Deer Island, October 11. 1942: 1 ♂, 2 ♀, Gulfport, January 14, March 17, December 6. 1943: 3 ♀, Biloxi, January 21, April 9 and 21; 1 ♀, Gulfport, April 4; 1 ♀, Deer Island, April 5.

The Orange-crowned Warbler is a fairly common winter resident on the Mississippi coast. It usually appears shortly after the middle of

October, and is rarely seen in the spring after the end of March. Unlike the other warblers, the Orange-crowned is rather solitary in its habits; single birds are found feeding alone in thickets or underbrush in woods bordering the stream. Apparently few individuals leave the mainland, for only at infrequent intervals were these birds noted on Deer Island. None were seen on the outer islands. The earliest date of arrival in the fall is October 11 (1941); the latest date of departure in the spring is April 21 (1943).

Vermivora ruficapilla ruficapilla (Wilson)
Nashville Warbler

1939: 1 ♀, Saucier, October 12. 1941: 2 ♂, Deer Island, October 11 and 16.

The Nashville Warbler is an extremely scarce transient on the Mississippi coast. It was never recorded in the spring, nor was it seen in the fall other than on the dates listed above.

Compsothlypis americana americana (Linnaeus)
Southern Parula Warbler

1938: 1 ♀, Deer Island, August 25. 1941: 1 ♀, Deer Island, August 10. 1942: 1 ♀, Deer Island, March 14.

The extreme scarcity of this race of the Parula Warbler as a transient on the Mississippi coast is not surprising since its breeding range is limited to the Atlantic coast. There are no records other than those listed above.

Compsothlypis americana pusilla (Wilson)
Northern Parula Warbler

1936: 1 ♂, Saucier, March 16; 1 ♀, Deer Island, September 22. 1937: 1 ♀, Deer Island, September 1. 1939: 1 ♂, Deer Island, March 4. 1942: 1 ♂, Deer Island, April 23.

This northern race of the Parula Warbler is likewise a rather scarce transient on the Mississippi coast, although it possibly may be more common than the few records indicate.

Compsothlypis americana ramalinae Ridgway
Western Parula Warbler

1935: 1 ♂, Bay St. Louis, April 21; 2 ♂, Saucier, August 15, October 19; 1 ♀, Gulfport, November 2. 1936: 1 ♀, Woolmarket, March 17; 3 ♂, 1 ♀, Gulfport, March 20, April 12 and 21, June 4; 1 ♀ im., Saucier, July 17; 1 ♂, 1 ♀, Deer Island, September 10, October 13. 1938: 2 ♂, Gulfport, March 12, April 27; 1 ♂, Horn Island, March 20; 1 ♀, Cat Island, March 21. 1939: 2 ♂, Gulfport, March 5 and 6; 1 ♂, Saucier, October 19. 1940: 2 ♂, 2 ♀, Deer Island, March 2 and 16, April 26, September 21; 2 ♂, Biloxi, March 8, May 7; 1 ♂, Ship Island, May

1. 1941: 4 ♂, 4 ♀, Deer Island, March 8 and 21, April 1, May 7, July 30, August 10 and 21, November 4; 2 ♂, Gulfport, March 15, October 24. 1942: 1 ♂, Gulfport, May 5; 2 ♀, Deer Island, August 6, September 4. 1943: 2 ♂, Biloxi, March 12, April 30; 2 ♂, Gulfport, March 18, April 10; 1 ♂, Saucier, April 23; 1 ♂, Deer Island, May 1.

Although described by Robert Ridgway over 40 years ago (Ridgway, 1902), this race of the Parula Warbler is recognized in few subsequent publications. A critical examination of the series listed above, approximately half of which were breeding birds, has convinced me, however, that this is a well-marked race and worthy of recognition. In both the color of the upper parts and the intensity of the black band on the throat, it resembles *pusilla,* but *ramalinae* is consistently much smaller. From *americana,* which it approaches in size, *ramalinae* differs in having a perceptibly smaller bill and a more conspicious black band on the throat.

The race *ramalinae* is a common breeding bird on the Mississippi coast, but is limited in its distribution to woodlands bordering the streams on the mainland. Only once was was there any indication that the Parula Warbler might occasionally nest on the islands. In 1942 a singing male was seen throughout April and May in a group of live oaks at the western end of Deer Island, and although no nest was found, it is probable that a pair of these birds reared a brood of young at this spot. Breeding activities begin rather early in the spring, for a nest found at Gulfport on April 21, 1936, held three eggs that would have hatched within the next 24 hours. Although normally seen in the fall until late in October, and not infrequently early in November, these warblers begin their southward migration in mid-summer. They were noted on Deer Island in late July (July 30, 1941), and are invariably present there in August.

Dendroica aestiva aestiva (Gmelin)
Eastern Yellow Warbler

1936: 1 ♀, Deer Island, July 31. 1937: 3 ♂, 5 ♀, Deer Island, April 30, July 21, August 21 and 28, September 13; 1 ♂, 2 ♀, Gulfport, May 1 and 14, August 6; 1 ♂, Ship Island, May 7; 1 ♀, Woolmarket, July 22. 1938: 1 ♂, 1 ♀, Deer Island, May 6, August 18; 1 ♂, 4 ♀, Gulfport, May 9, July 23, August 19, September 27, October 20. 1939: 1 ♀, Cat Island, October 3; 1 ♀, Deer Island, October 7. 1940: 1 ♂, Ship Island, April 10; 4 ♂, 4 ♀, Deer Island, April 13, 20, 26 and 30, May 16, July 24, September 12; 1 ♂, 1 ♀, Gulfport, April 21, July 25; 1 ♂, Saucier, April 23. 1941: 1 ♂, 2 ♀, Gulfport, May 2, July 26 and 29. 1942: 1 ♂, Cat Island, May 10; 1 ♂ im., 1 ♀ im., Gulfport, August 1 and 8; 1 ♀, Deer Island, September 12.

This species in one of the commonest of the warblers occurring in migration on the Mississippi coast, and is equally numerous in the

spring and in the fall. Its preference for the vicinity of water is clearly shown by its relative abundance on the islands, and by the fact that on the mainland it is rarely seen very far inland. An occasional bird was observed between Gulfport and Saucier, feeding in underbrush at the side of a road, but it is in the large live oaks characteristic of this part of the coast that the Yellow Warbler is commonly found. On the islands, the beaches are bordered by a narrow fringe of rather open underbrush composed largely of the coffee bush (*Daubentonia longifolia*), and it is there that these warblers largely occur. In the spring they are usually plentiful from the middle of April until the middle of May, while in the fall they can be seen almost daily from the latter part of July until the middle of October.

Dendroica aestiva rubiginosa (Pallas)
Alaska Yellow Warbler

1938: 1 ♀, Gulfport, October 21. 1939: 1 ♂ im., Saucier, October 19. 1941: 1 ♂ im., Deer Island, October 11. 1942: 1 ♀, Deer Island, August 24; 1 ♀, Deer Island, September 12.

On the basis of the specimens listed above, the Alaskan race of the Yellow Warbler appears to be a scarce but a regular transient on the Mississippi coast during the fall months.

Dendroica aestiva amnicola Batchelder
Newfoundland Yellow Warbler

1936: 2 ♀, Deer Island, May 9, October 7. 1937: 1 ♂, 2 ♀, Deer Island, August 21, September 24. 1938: 1 ♂, 2 ♀, Gulfport, September 26, 27, and 30. 1939: 1 ♂, Gulfport, May 15; 1 ♂, 2 ♀, Deer Island, September 18 and 27. 1940: 2 ♂, 4 ♀, Deer Island, May 25, September 21 and 27, October 12. 1941: 1 ♀, Deer Island, September 20; 1 ♀, Gulfport, October 3. 1942: 1 ♂, Deer Island, May 7. 1943: 1 ♂, Gulfport, May 5.

Since *amnicola* has been found by Oberholser (1938: p. 531) to be the breeding race throughout all of northern Canada, it is not surprising that this subspecies is a regular and not uncommon transient on the Mississippi coast. It apparently arrives a month later in the spring than *aestiva,* and is equally late in its arrival in the fall.

Extreme dates of occurence for the species as a whole are April 10 (1940) and May 25 (1940); July 21 (1937) and October 21 (1938).

Dendroica magnolia (Wilson)
Magnolia Warbler

1935: 1 ♀, Saucier, September 25. 1936: 3 ♀, Gulfport, September 19, November 2 and 8; 1 ♂ im., Deer Island, September 30. 1937: 2 ♂, 1 ♀, Gulfport,

April 23, May 9; 1 ♂, Cat Island, April 25; 1 ♀, Deer Island, September 13. 1938: 2 ♀, Deer Island, May 6, November 5; 1 ♂, Gulfport, May 11. 1939: 1 ♀, Deer Island, May 9; 1 ♀, Saucier, May 15; 1 ♀, Gulfport, May 16. 1940: 2 ♂, 1 ♀, Deer Island, April 26, May 16 and 21; 2 ♀, Gulfport, September 11, October 29. 1941: 2 ♀, Deer Island, May 15, November 8; 2 ♀, Gulfport, September 19, November 5. 1942: 1 ♀, 1 ♂ im., Gulfport, January 11, September 13; 1 ♂, Deer Island, May 14; 1 ♀, Biloxi, December 23. 1943: 1 ♂, Deer Island, May 12.

The Magnolia Warbler is an irregular and usually rather scarce transient in the spring and a common transient in the fall on the Mississippi coast. During the spring migration an occasional bird is seen late in April and in May; ordinarily not over three or four are recorded at that time. In 1937, however, and again in 1940, these warblers were almost plentiful, and were frequently noted both on the mainland and on the islands. In the fall they appear shortly before the middle of September, are plentiful within a week or so, and do not decrease perceptibly in numbers until the latter part of October. Since this species has never been recorded during the winter months north of southern Mexico, it was a great surprise to me to find that it winters at least casually on the Mississippi Gulf coast. On January 11, 1942, while crossing a stretch of thick swampy woods near Gulfport, a female Magnolia Warbler was seen feeding in underbrush within a few feet of the ground. It was collected to verify the identification and was found to be normal in every respect, with no evidence of any injury to account for its presence so far out of its accepted range at this season of the year. The following winter this species was watched for in similar stretches of woods, and on December 23, 1942, another female was taken near Biloxi. Although positive conclusions are not justified on the basis of these two records, I am of the opinion that the Magnolia Warbler should not be considered of mere accidental occurrence on the Mississippi coast during the winter months. Many areas where an occasional bird might be found at that time are so thickly overgrown they are almost impenetrable. It is therefore rather easy to overlook a species as small and inconspicious as this one. It will be interesting to note if additional mid-winter records for the occurrence of the Magnolia Warbler on the Gulf coast result from further studies. Extreme dates of occurrence for this species for the spring migration are April 19, (1943) and May 21 (1940), and for the fall migration September 7 (1939) and November 8 (1936).

Dendroica tigrina (Gmelin)
Cape May Warbler

1940: 2 ♀, Ship Island, May 1.

The Cape May Warbler is apparently a very rare transient on the Mississippi coast. In addition to the specimens listed below, a third bird was seen the same day on Ship Island, feeding, as were the others, with large numbers of transient warblers in the live oaks at the edge of the open pine woods. These are the only records.

Dendroica caerulesens caerulescens (Gmelin)
Black-throated Blue Warbler

1940: 1 ♂, Deer Island, April 30; 1 ♂, Ship Island, May 1. 1942: 1 ♂, Deer Island, May 1; 1 ♀, Deer Island, September 20.

The Black-throated Blue Warbler is another species that is rarely seen on the Gulf coast of Mississippi. I have but one other record in addition to the specimens listed above, a male seen near Gulfport on October 12, 1941, feeding with other warblers at the edge of a pecan orchard.

Dendroica coronata coronata (Linnaeus)
Myrtle Warbler

1935: 1 ♂, Gulfport, November 11; 1 ♂, Saucier, December 23. 1936: 1 ♀, Saucier, April 21; 1 ♂, Woolmarket, December 23. 1937: 1 ♂, Gulfport, January 3; 1 ♀, Saucier, January 4; 1 ♀, Horn Island, November 4. 1938: 1 ♀, Gulfport, January 16; 1 ♂, Saucier, April 11. 1939: 1 ♂, Saucier, February 14; 1 ♀, Gulfport, October 15. 1940: 3 ♀, Gulfport, January 21, April 21, October 20; 2 ♀, Deer Island, March 2, April 30; 1 ♀, Ship Island, April 10; 2 ♂, 1 ♀, Biloxi, April 16 and 25, May 2. 1941: 3 ♂, Gulfport, March 4, October 12, December 21; 1 ♂, Deer Island, February 13. 1942: 1 ♀, Deer Island, October 26; 1 ♂, Gulfport, December 16; 1 ♀, Saucier, December 23. 1943: 1 ♂, 1 ♀, Deer Island, February 24, April 12; 1 ♂, Biloxi, April 21.

The Myrtle Warbler is an abundant winter resident on the Mississippi coast and is possibly the most widely distributed species at this season of the year. The first birds appear about the middle of October, and by the end of the month small flocks are literally everywhere. They are equally plentiful both on the mainland and on all the islands, feeding indiscriminately in the live oaks, in the open pine woods, in the myrtle thickets fringing the salt marsh, and even on the beaches. Toward the end of March the flocks seen throughout the winter disappear, and only a relatively small number of these birds are noted during the following month. These latter birds apparently come from farther south. The earliest date of arrival is October 12 (1939); the latest date of departure in the spring is May 3 (1937). Average dates of arrival and departure are October 24 and April 24.

Dendroica coronata hooveri McGregor
Hoover Warbler

1936: 1 ♂, Saucier, February 18; 1 ♂, Deer Island, February 28. 1937: 1 ♂, Cat Island, February 12. 1939: 1 ♂, Gulfport, February 12. 1943: 1 ♂, Biloxi, April 14.

This western race of the Myrtle Warbler, distinguished by its large size and more extensive black on the breast, is apparently rather uncommon on the Mississippi coast. Since I have no records for the fall or winter months, it is quite possible that the status of the race is that of a scarce spring transient, rather than a winter resident. Further collecting is necessary, however, to decide this point.

Dendroica townsendi (Townsend)
Townsend Warbler

1939: 1 ♀, Gulfport, September 17.

This female Townsend Warbler was feeding alone in the upper branches of a large pecan tree. At a distance it closely resembled a female Blackburnian Warbler and was almost passed by. A species so restricted in its breeding range to the Pacific Northwest, as is *Dendroica townsendi,* must be merely of accidental occurrence on the Gulf coast.

Dendroica virens virens (Gmelin)
Black-throated Green Warbler

1935: 1 ♀, Saucier, October 8. 1936: 1 ♀, Deer Island, April 10. 1937: 1 ♂, Deer Island, April 30; 1 ♀, Horn Island, May 12; 1 ♀, Gulfport, November 3. 1938: 1 ♂, 2 ♀, Deer Island, May 6, October 15, November 5; 1 ♀, Saucier, October 24; 1 ♀, Gulfport, November 6. 1939: 1 ♀, Cat Island, October 3; 1 ♂, 2 ♀, Gulfport, October 20, November 12 and 18; 1 ♂ im., Saucier, November 17. 1940: 2 ♀, Ship Island, April 10, May 1; 1 ♂, 1 ♀, Deer Island, April 26, September 26; 1 ♀, Cat Island, September 13. 1941: 1 ♂, Deer Island, May 7. 1942: 1 ♂, Gulfport, March 24.

The Black-throated Green Warbler is another species that is usually scarce and extremely erratic in its appearance in the spring. One year only, 1937, was it at all common, being seen that spring almost daily from the latter part of April until the middle of May. Other years only two or three birds were recorded during the entire spring migration, often at an interval of a month or more, and at dates varying from the end of March until the first week in May. In the fall, however, the species is always a fairly common transient, usually appearing toward the end of September, rarely by the middle of the month, and is frequently seen until early in November. It is equally numerous at that

time in stretches of woods bordering the streams on the mainland, and in the live oaks on the islands. The extreme dates of occurence in the spring are March 24 (1942) and May 12 (1937), and in the fall, September 13 (1940) and November 18 (1939).

Dendroica cerulea (Wilson)
Cerulean Warbler

1936: 1 ♀, Woolmarket, April 7; 3 ♀, Gulfport, August 1, September 11. 1937: 1 ♂, 3 ♀, Gulfport, July 28, August 2, 7, and 26. 1938: 1 ♀ im., Gulfport, August 7; 1 ♂ im., Saucier, August 9. 1939: 1 ♀, Gulfport, September 15. 1940: 2 ♂, 1 ♀, Deer Island, April 13 and 26, September 26; 1 ♀, Ship Island, May 1. 1941: 1 ♂ im., 2 ♀ im., Gulfport, July 26, August 3, September 17. 1942: 1 ♂, 1 ♀ im., Gulfport, August 1, September 9. 1943: 1 ♀, Gulfport, August 27.

The Cerulean Warbler is still another species that is fairly common in the fall, but is rarely seen in the spring. Actually I have only six records for the spring migration, as follows: 1936—a female at Woolmarket on April 7, and a male at Saucier on April 8; 1940—a male on Deer Island on April 13, a female at the same place on April 26,, and a female on Ship Island on May 1; 1943—a male on Deer Island on April 19. In the fall the first arrivals usually appear during the last of July, are invariably present in early August, and are seen almost daily then until the middle of September. With one exception, I noted this species in the fall only in woods bordering the streams on the mainland. On September 26, 1940, a single bird, an adult male, was seen on Deer Island, feeding with other warblers in a live oak at the edge of the open pine woods. This was, by one day, my latest record. Extreme dates of occurrence otherwise are July 26 (1941) and September 25 (1935).

Dendroica fusca (Müller)
Blackburnian Warbler

1936: 1 ♂, 1 ♀, Saucier, March 28, September 18. 1937: 3 ♂, 1 ♀, Gulfport, March 27, May 10, September 2. 1939: 2 ♀, Deer Island, September 16 and 27; 1 ♂ im., 1 ♀, Cat Island, September 21, October 3. 1940: 1 ♂, Biloxi, April 25; 1 ♂, Ship Island, May 1; 1 ♀, Cat Island, May 5; 1 ♀, Gulfport, September 11; 1 ♀, Deer Island, September 26. 1941: 1 ♀, Biloxi, April 5; 1 ♂, 1 ♀, Deer Island, May 7, October 16; 1 ♂ im., 2 ♀, Gulfport, August 23, September 14, October 18. 1942: 1 ♂, Gulfport, August 27.

The Blackburnian Warbler is a rather scarce transient in the spring and almost equally uncommon in the fall. It was recorded in small numbers each year, but, especially in the spring, was seen at rather infrequent intervals and at widely varying dates. It was most frequently observed in April, and again in September. Extreme dates

of occurence for the spring migration are March 27 (1937) and May 10 (1942), and for the fall migration, August 23 (1941) and October 16, (1941).

Dendroica dominica dominica (Linnaeus)
Yellow-throated Warbler

1939: 1 ♂, Deer Island, September 16. 1941: 1 ♂, Gulfport, March 9.

This eastern race is apparently extremely scarce as a transient on the Gulf coast for there are no records other than those listed above.

Dendroica dominica albilora Ridgway
Sycamore Warbler

1936: 1 ♂, 4 ♀, Gulfport, March 18, April 25, July 9 and 25; 1 ♂, 3 ♀, Deer Island, April 10, July 21 and 31. 1937: 2 ♂, 2 ♀, Gulfport, July 25, August 2, September 4; 1 ♂, Woolmarket, July 30, 1 ♀, Deer Island, September 13. 1938: 2 ♂, Gulfport, March 17, July 23; 1 ♂, Pearlington, May 10. 1939: 2 ♂, Gulfport, March 5, September 28; 2 ♀, Deer Island, March 4, September 16. 1940: 1 ♂, 3 ♀, Gulfport, July 22 and 25, September 14 and 25; 4 ♀, Deer Island, April 13, September 21 and 26, October 5. 1941: 2 ♂, 1 ♀, Gulfport, August 8 and 15, October 4; 1 ♂, Pearlington, June 23; 1 ♀, Biloxi, March 12; 3 ♂, Deer Island, March 13 and 21, April 1. 1942: 1 ♂, 2 ♀, Gulfport, August 1, 5 and 8; 1 ♂, Deer Island, March 7; 2 ♀, Cat Island, March 16 and 29. 1943: 1 ♂, Gulfport, March 9; 1 ♂, Biloxi, March 21; 1 ♂, 2 ♀, Deer Island, March 8.

A wide gap exists on the Gulf coast between the breeding ranges of *dominica* and *albilora*, for on the Mississippi coast, *albilora* occurs as a breeding bird only in woods bordering the Pearl River at Pearlington. This is in the extreme southwestern corner of the State, on the Louisiana line, and marks the most eastern point where this subspecies is known to nest in southern Mississippi. Elsewhere on the coast it is a common transient. Extreme dates of occurrence in the spring are March 4 (1939) and April 25 (1936), and in the fall, July 9 (1936) and October 5 (1940). It is most frequently seen the latter half of March, and again late in July and early in August, and is equally numerous in woods bordering the streams on the mainland and in the live oaks on the islands. After carefully studying the small series listed above, the conclusion was reached that *albilora* is a rather variable race. Although typical specimens lack the yellow on the lores, this is by no means constant, some individuals having the lores as distinctly yellow as in *dominica* and many show at least a trace of this color. The most satisfactory character was found to be the size of the bill, which in *albilora* is distinctly small and slender in contrast to the large, stout bill of *dominica*.

Dendroica pensylvanica (Linnaeus)
Chestnut-sided Warbler

1935: 1 ♀, Saucier, September 27. 1936: 1 ♀, Woolmarket, September 25; 1 ♂, Saucier, October 2. 1937: 1 ♂, 1 ♀, Gulfport, April 22, September 17; 1 ♂, Cat Island, April 25; 1 ♂, Ship Island, May 7. 1940: 1 ♂, Gulfport, April 14; 2 ♂, 1 ♀, Deer Island, April 26, September 26 and 27. 1941: 1 ♂, Deer Island, May 7; 1 ♀, Saucier, September 18; 1 ♀, Gulfport, October 8. 1942: 1 ♂ im., Deer Island, January 6; 1 ♀, Gulfport, September 9; 1 ♂, Deer Island, December 1.

In common with so many of the warblers, this species is usually somewhat scarce and irregular during the spring migration, but fairly common during the fall. Normally two or three birds were seen each spring late in April and early in May, and there was an occasional year (1937, 1940, 1943) when they were frequently noted during the last two weeks in April. In the fall they reappeared shortly after the middle of September, and were present through the first week in October, both on the mainland and on the islands. Since there are no previous winter records for this species north of Guatamala, it was rather surprising to find it on the Gulf coast at this season of the year. On January 6, 1942, a male in immature plummage was seen on Deer Island, feeding alone in underbrush fringing the open beach. The bird was collected so that there might be no question of its identity. It was found to be normal in every respect and with no evidence of injury to account for its presence in the United States during the mid-winter. At the time the record was considered merely an accidental one that was of no special significance. The following winter, however, another male, this time in adult plumage, was seen on Deer Island on December 1, feeding in underbrush at the edge of the open pine woods. Two records are inconclusive and do not justify a statement concerning the exact status of this species on the Mississippi coast other than as a transient. I have little reluctance now, however, in considering it of casual occurrence on the islands during the winter months. The extreme dates of occurrence for the spring migration are April 14 (1940) and May 7 (1937), and for the fall migration, September 6 (1942) and October 8 (1941).

Dendroica castanea (Wilson)
Bay-breasted Warbler

1935: 1 ♂, Saucier, October 24. 1936: 1 ♀, Deer Island, May 29. 1937: 1 ♂, Saucier, April 24; 1 ♂, Cat Island, April 25; 1 ♀, Gulfport, April 29; 1 ♂, Horn Island, May 12. 1938: 1 ♂, Gulfport, May 5. 1940: 1 ♂, Biloxi, April 25; 1 ♀, Ship Island, May 1; 1 ♀, Cat Island, May 5; 1 ♂, Gulfport, May 6; 1 ♂,

Deer Island, May 10. 1941: 1 ♂, Deer Island, May 10; 1 ♀, Deer Island, October 11; 1 ♀, Gulfport, October 22. 1943: 1 ♂, Deer Island, April 19.

Although normally rather scarce, the Bay-breasted Warbler is a regular spring transient on the Mississippi coast, a few birds being seen each year late in April and early in May. There was an occasional year, however, notably 1937 and 1940, when this species was fairly plentiful and was frequently seen during this same interval on the mainland and on the islands. Only rarely was one of these warblers noted after the middle of May. Extreme dates of occurrence for the spring migration are April 19 (1943) and May 29 (1936). In the fall this species is an extremely rare transient, my few records at that time being as follows: a male at Saucier on October 24, 1935; a female on Deer Island on October 11, 1941; two birds (apparently females) at Gulfport on October 19, 1941; and a female also at Gulfport on October 22, 1941.

Dendroica striata (Forster)
Black-poll Warbler

1936: 1 ♂, Gulfport, May 27; 1 ♀, Deer Island, May 29. 1937: 1 ♂, Horn Island, May 12. 1940: 1 ♂, Deer Island, April 26; 1 ♀, Ship Island, May 1. 1941: 1 ♂, 2 ♀, Deer Island, May 1. 1942: 1 ♀, Deer Island, May 7.

The Black-poll Warbler is a scarce and rather erratic spring transient on the Mississippi coast for I have no records other than those listed above. Since its migration route in the fall is largely restricted to the Atlantic coast it is doubtful if it occurs anywhere in the State at this season of the year.

Dendroica pinus pinus (Wilson)
Northern Pine Warbler

1935: 2 ♂, Saucier, May 11, December 12. 1936: 1 ♂, Saucier, April 1. 1937: 1 ♂, Cat Island, February 12; 1 ♀, Saucier, October 29. 1938: 2 ♂, 1 ♀, Deer Island, March 14, November 5, December 21; 1 ♂ im., Deer Island, June 21; 2 ♂, Horn Island, March 20. 1939: 1 ♀, Cat Island, October 3. 1941: 1 ♂, Deer Island, March 1; 1 ♂, Gulfport, March 4. 1942: 3 ♂, 1 ♀, Biloxi, February 24, December 25; 1 ♂, Cat Island, March 29; 1 ♂ im., Deer Island, April 27. 1943: 4 ♂, 1 ♀, Deer Island, February 24, March 2 and 4; 1 fledgling ♂, Deer Island, April 5; 2 ♂, Saucier, March 1; 1 ♂, Biloxi, March 5; 1 ♂, Gulfport, March 9.

The Pine Warbler is one of the commonest and most widely distributed birds on the Mississippi coast, occurring everywhere in the wide stretches of open pine woods characteristic of both the mainland and the islands. There is always a noticeable increase in the number of these birds seen late in the fall and in winter months. This is unquestionably due to the presence of transients from farther north. Breeding activities begin rather early in the spring, for on February 24, 1943, a female was noted

on Deer Island working on a nest that was partially built. This was not an exceptionally early date, for in previous years broods of well-fledged young were frequently seen shortly after the first of April. This species is generally assumed to rear only one brood each spring, but a female seen carrying nesting material on May 8, 1943, was apparently nesting for the second time that year. How widespread this habit is remains of course to be determined by further observations.

Dendroica discolor discolor (Vieillot)
Northern Prairie Warbler

1936: 3 ♀, Deer Island, April 10, July 31, August 6. 1937: 2 ♂ im., 1 ♀ im., Deer Island, July 31, August 21, September 24. 1938: 1 ♂, Deer Island, August 13. 1939: 1 ♀, Deer Island, September 18; 1 ♀, Gulfport, September 24. 1940: 3 ♀, Deer Island, April 20 and 26, September 26; 1 ♂ im., Gulfport, September 29. 1941: 1 ♂, Gulfport, April 6; 3 ♂, 2 ♀, Deer Island, May 1, August 10, September 20, October 26 and 29. 1942: 1 ♂ im., 1 ♀, Gulfport, August 4 and 30.

The Prairie Warbler is an extremely uncommon transient in the spring. I never recorded more than one or two during a spring migration, and there were frequent years when none were seen. In the fall, however, this species is a fairly common transient, appearing late in July or early August. It was frequently observed from then until late September. Unlike the other warblers, this species is rarely found on the mainland, over 90 per cent of my records being of birds seen on the islands. So infrequently, in fact, were Prairie Warblers seen on the mainland that the presence of an occasional bird at Gulfport was considered worthy of special comment in my field notes. The extreme dates of occurrence for this species for the spring migration (six records) are April 6 (1941) and May 1 (1941), and for the fall migration, July 31 (1936) and October 29 (1941).

Dendroica palmarum palmarum (Gmelin)
Western Palm Warbler

1935: 1 ♂ im., Saucier, October 2. 1936: 3 ♀, Gulfport, March 11, October 31, November 8; 1 ♂ im., 1 ♀, Deer Island, April 10, September 30. 1937: 1 ♂, Cat Island, April 25. 1938: 1 ♂, Cat Island, March 21; 1 ♂, Gulfport, April 12; 1 ♀, Deer Island, September 24. 1939: 4 ♂, Deer Island, January 31, March 4, December 7 and 19; 1 ♀, Cat Island, September 21. 1940: 1 ♀, Cat Island, September 13; 1 ♀, Gulfport, December 22. 1941: 2 ♂, Gulfport, March 19, December 5; 1 ♂, 1 ♀, Deer Island, March 26, December 13. 1942: 1 ♂, 1 ♀, Deer Island, March 7, September 22; 1 ♂, Cat Island, March 16; 1 ♀, Lyman, December 29. 1943: 1 ♂, Gulfport, April 7; 1 ♀, Lyman, April 17.

The Palm Warbler is a common winter resident on the Mississippi coast, usually appearing in the fall shortly after the middle of September and lingering in the spring until almost the end of April. It is characteris-

tically a bird of the more open country, and although equally numerous both on the mainland and on the islands it consistently avoids the thicker stretches of woods. Usually small flocks containing from five to eight individuals are seen, feeding on the ground in the open pine woods, or in fields or pastures.

This western race is much more common as a transient than as a winter resident. It is seen in small numbers from the last of October until the middle of March. It appears in the fall a month earlier than *hypochrysea*, and is invariably present in the spring almost three weeks longer than the latter. My earliest date of arrival in the fall is September 13 (1940); my latest date of departure in the spring is April 25 (1937).

Dendroica palmarum hypochrysea Ridgway
Yellow Palm Warbler

1935: 1 ♂, Gulfport, October 18. 1936: 2 ♂, Gulfport, January 1, February 14; 2 ♀, Saucier, April 2 and 3. 1937: 1 ♂, Deer Island, December 31. 1938: 1 ♀, Gulfport, April 5. 1939: 1 ♂, Horn Island, January 21. 1940: 1 ♀, Saucier, November 19; 1 ♂, Deer Island, November 30. 1941: 1 ♂, Deer Island, March 7. 1942: 1 ♂, Deer Island, December 7; 1 ♀, Biloxi, December 25. 1943: 1 ♀, Saucier, January 20; 1 ♂, Gulfport, April 7.

This eastern race was not observed in the fall until after the middle of October, and in the spring it was only infrequently seen after the end of March. It is much more common throughout the winter months, however, than *palmarum*. The earliest date of arrival in the fall is October 18 (1935); the latest date of departure in the spring is April 8 (1938).

Seiurus aurocapillus aurocapillus (Linnaeus)
Eastern Oven-bird

1935: 1 ♀, Saucier, September 24. 1936: 1 ♂, Gulfport, May 7. 1937: 1 ♀ im., Gulfport, August 30. 1941: 1 ♀, Gulfport, October 14. 1942: 2 ♀, Deer Island, May 13, August 28; 2 ♀, Gulfport, May 15 and 17. 1943: 1 ♂, Biloxi, April 9; 1 ♂, Deer Island, November 1.

The Oven-bird is a fairly common transient on the Mississippi coast and is seen equally as often in the spring as in the fall. On the mainland it is found almost entirely in the stretches of woods bordering the streams, whereas on the islands, it is frequently seen about the palmetto thickets in the open pine woods. Although it arrives in the spring late in March or early in April, it is usually late in April and early in May that the species is most frequently observed. In the fall an occasional bird appears the last of August or the first week in September, but only during the latter part of September and early in October is it fairly plentiful. Extreme dates of occurence for this species for the spring migration are March

31 (1938) and May 17 (1942), and for the fall migration August 25 (1937) and November 1 (1943).

Seiurus aurocapillus furvior Batchelor
Newfoundland Oven-bird

1938: 1 ♀, Deer Island, October 15. 1939: 1 ♀, Deer Island, May 13. 1940: 2 ♀, Deer Island, April 30, September 12. 1941: 1 ♀, Deer Island, May 10.

Although recognized in only a few publications *furvior* appears to be a valid race since it is readily distinguished from *aurocapillus* by its distinctly darker upper parts. I have observed this race to be a common breeding bird in Newfoundland, and doubtless it occurs as a regular transient throughout the eastern United States.

Seiurus aurocapillus cinereus Miller
Gray Oven-bird

1936: 1 ♂, Gulfport, April 8. 1937: 1 ♀, Horn Island, May 12. 1940: 1 ♂, Deer Island, April 13. 1943: 1 ♀, Gulfport, May 11.

This recently described subspecies which is characterized by paler (grayer) upper parts, is apparently of at least casual occurrence on the Gulf coast in the spring. Comparatively few Oven-birds were collected in the fall; so it is possible that *cinereus* is present also at that time.

Seiurus noveboracensis noveboracensis (Gmelin)
Northern Water-thrush

1937: 1 ♀, Deer Island, September 1. 1939: 1 ♂, Deer Island, September 16. 1940: 1 ♀, Deer Island, May 13.

This eastern race of *Seiurus noveboracensis* is an extremely scarce transient on the Mississippi coast. Of a series of thirty-seven water-thrushes collected in the spring and fall, only the three specimens listed above were found referable to *noveboracensis*.

Seiurus noveboracensis notabilis Ridgway
Grinnell Water-thrush

1935: 1 ♀, Deer Island, October 7; 3 ♀, Gulfport, October 9, 10, and 13; 1 ♀, Saucier, October 23. 1936: 1 ♂, 1 ♀, Gulfport, May 6, September 11; 1 ♀, Deer Island, August 31; 1 ♂, Saucier, September 18. 1937: 1 ♂, 1 ♀, Deer Island, April 21, August 28; 1 ♀, Gulfport, September 6. 1938: 1 ♂, 1 ♀, Gulfport, April 27, August 27; 2 ♀, Deer Island, August 18 and 25. 1939: 1 ♂, 1 ♀, Gulfport, October 2 and 16; 1 ♂, 1 ♀, Deer Island, October 13 and 21. 1940: 1 ♂, Deer Island, April 26; 1 ♂, 2 ♀, Gulfport, September 11, 14, and 15. 1941: 1 ♀,

Gulfport, August 18; 1 ♂, 2 ♀, Deer Island, August 21, September 25, October 7. 1942: 1 ♂, 1 ♀, Deer Island, April 23, May 7; 1 ♀, Gulfport, May 17; 1 ♂, Deer Island, April 19.

The western race, *notabilis,* occurs as a fairly common transient on the Mississippi coast. Like so many of the warblers, it is usually infrequently seen in the spring, although there was an occasional year when it was recorded almost daily late in April or early in May. In the fall it appears regularly shortly after the middle of August, and is always fairly plentiful throughout September and the first week in October. On the mainland it is limited in its occurence to the stretches of woods bordering the streams, but on the islands it shows no hesitation in feeding about the palmetto thickets. Extreme dates of occurrence for the spring migration are April 19 (1943) and May 17 (1942), and for the fall migration, August 13 (1942) and October 24 (1941).

Seiurus noveboracensis limnaeus Miller
British Columbia Water-thrush

1942: 1 ♂ im., Gulfport, August 13; 1 ♀, Deer Island, September 4.

The two specimens listed above have been identified by Alden H. Miller as *limnaeus,* a race he recently described from British Columbia.

Seiurus motacilla (Vieillot)
Louisiana Water-thrush

1936: 1 ♂, Saucier, March 12; 1 ♂, 2 ♀, Gulfport, April 26, July 18 and 29. 1938: 1 ♀ im., Gulfport, July 12. 1939: 1 ♀, Saucier, March 8. 1940: 1 ♂, 1 ♀, Gulfport, March 20, October 29. 1941: 1 ♂, Gulfport, March 15; 2 ♂, 1 ♀, Deer Island, March 21 and 26, April 10. 1942: 1 ♂, Deer Island, March 26, 1 ♂, Cat Island, March 29; 1 ♀, Gulfport, July 30. 1943: 1 ♀, Deer Island, April 8.

Despite the fact that the Louisiana Water-thrush nests at Brooklyn, a locality within 50 miles of the coast, and is a fairly common breeding bird over much of the State, it is a scarce and rather erratic transient in the extreme southern part of Mississippi. A few birds are seen each spring and fall, but they appear at widely varying dates, and usually at rather infrequent intervals. This species was recorded most frequently during the latter part of March, and again late in July and in August. Extreme dates of occurence for the spring migration are March 8 (1939) and April 26 (1936), and for the fall migration, July 9 (1937) and October 29 (1940). This October record is decidedly exceptional, for otherwise my latest date of departure is August 30 (1937). The October bird was a female that was feeding in a thicket in woods bordering a

stream near Gulfport. On being collected to verify identification it was found to be very fat and apparently normal in every respect.

Oporornis formosus (Wilson)
Kentucky Warbler

1936: 1 ♀, Woolmarket, April 7; 1 ♂ im., Saucier, August 7. 1937: 1 ♀, Gulfport, September 17. 1938: 2 ♂, Gulfport, April 3, July 17; 1 ♂, Deer Island, April 16. 1939: 1 ♀ im., Cat Island, September 21. 1940: 1 ♀, Ship Island, May 1. 1941: 2 ♂, Gulfport, April 6, October 2; 2 ♀, Deer Island, May 1, and 7. 1942: 2 ♂, Gulfport, August 2 and 15. 1943: 1 ♀, Gulfport, May 16.

The Kentucky Warbler is a fairly common summer resident on the Mississippi coast where scattered pairs nest in many of the sketches of woods bordering the streams on the mainland. The first arrivals in the spring appear shortly after the first of April and within a week singing males are much in evidence. On the islands this species is a common transient, and is present throughout all of April and not infrequently through the first week in May. I noted it on Cat Island as late as April 25 (1937), on Ship Island on May 1 (1940), and on Deer Island as late as May 7 (1941). The fall migration begins rather early for an occasional bird has reappeared on Deer Island as early as July 31 (1936). By the middle of August it is usually possible to record six or eight there in the course of a morning. The earliest date of arrival in the spring is April 3 (1938); the latest date of departure in the fall is October 6 (1940).

Oporornis philadelphia (Wilson)
Mourning Warbler

1937: 1 ♂ im., Deer Island, September 13. 1940: 1 ♂ im., Gulfport, September 11; 1 ♂ im., Cat Island, September 13. 1942: 1 ♂, Deer Island, September 12.

The Mourning Warbler is an extremely scare transient on the Mississippi coast, and apparently occurs only in the fall. I have no records other than those listed above.

Geothlypis trichas (Linnaeus)
Yellow-throat

In view of the fact that this species has been long in need of a thorough revision, and since there are unquestionably valid races yet unrecognized by taxonmists, only tentative identifications are given here. In addition to *typhicola,* a race described from Georgia, there are three recognized forms occurring in the eastern United States. A study of the material on hand showed plainly that many of the specimens possessed

characters that made them difficult to assign definitely to one or another of the four eastern races. Until names are available for the undescribed forms, I consider it best to identify the yellow-throats that were collected on the basis of the characters now accepted as separating the four races. I realize that the identifications here given are in some cases subject to change.

GEOTHLYPIS TRICHAS TRICHAS (LINNAEUS)
MARYLAND YELLOW-THROAT

1936-1943: 7 ♂, 11 ♀, the last of August (August 21, 1941) through the first week of May (May 9, 1939), at Gulfport, Deer Island, and Cat Island.

GEOTHLYPIS TRICHAS BRACHIDACTYLA (SWAINSON)
NORTHERN YELLOW-THROAT

1935-1943: 25 ♂, 9 ♀, from the middle of September (September 12, 1937) until almost the end of May (May 25, 1936), at Saucier, Pearlington, Pass Christian, Gulfport, Biloxi, Deer Island, Ship Island, and Horn Island.

GEOTHLYPIS TRICHAS IGNOTA CHAPMAN
FLORIDA YELLOW-THROAT

1935-1943: 33 ♂, 8 ♀, every month of the year except July, at Saucier, Pearlington, Gulfport, Biloxi, Pascagoula, Deer Island, Cat Island, and Petit Bois Island.

GEOTHLYPIS TRICHAS TYPHICOLA BURLEIGH
ATHENS YELLOW-THROAT

1935-1943: 22 ♂, 8 ♀, from the last of September (September 28, 1935) until almost the middle of May (May 10, 1938), at Saucier, Lyman, Bay St. Louis, Gulfport, Deer Island, and Cat Island.

GEOTHLYPIS TRICHAS OCCIDENTALIS BREWSTER
WESTERN YELLOW-THROAT

1941: 1 ♂, Gulfport, September 28.

As can be noted from the specimens listed above, the races *trichas*, *brachidactyla*, and *typhicola* occur throughout the winter months, *trichas* being less numerous, however, than the other two races. The subspecies *ignota* is a fairly common breeding bird on the mainland, but was noted only once during the summer months on any of the islands. What was apparently a breeding pair of Yellow-throats was seen on Ship Island on May 30, 1937. Oddly enough, I never found this species nesting on Deer Island. *Ignota* has an extremely limited distribution on the coast, for breeding birds taken at Saucier, approximately 22 miles north of Gulfport, were found to be intermediate in their characters. Although closest to

the Florida race, they were by no means typical. Even though fairly common in the winter, yellow-throats were observed in greatest numbers as fall transients, there being occasional days in late September when they were seen literally everywhere. In the spring they were common throughout most of April, but were never as abundant then as in the fall.

Icteria virens virens (Linnaeus)
Yellow-breasted Chat

1935: 1 ♂ im., Saucier, July 11. 1936: 1 ♂, Gulfport, May 10; 1 ♀, Woolmarket, June 3. 1937: 1 ♂, Gulfport, September 29. 1938: 1 ♂, Deer Island, October 29. 1939: 1 ♂, Gulfport, May 28; 1 ♀, Deer Island, October 13. 1940: 1 ♀, Deer Island, October 19. 1941: 1 ♂, Gulfport, May 18. 1943: 1 ♂, Gulfport, May 4.

The Yellow-breasted Chat is a scarce and rather local summer resident on the Mississippi coast that usually appears in the spring shortly after the middle of April and lingers in the fall until almost the end of October. It does not nest on the islands, but occurs there as a fairly common transient, and is especially numerous in the fall when it is frequently seen about the palmetto thickets in the open pine woods. The earliest date of arrival in the spring is April 15 (1936); the latest date of departure in the fall, October 29 (1938).

Wilsonia citrina (Boddaert)
Hooded Warbler

1935: 2 ♂, Saucier, June 7, November 1. 1936: 1 ♂, Woolmarket, March 17. 1938: 2 ♂, Gulfport, March 17, July 3. 1939: 1 ♂, Saucier, June 24. 1940: 2 ♂, Deer Island, April 13, September 6; 1 ♂, Gulfport, May 19. 1941: 2 ♂, 1 ♀, Deer Island, March 21, July 30, November 8. 1942: 2 ♂, Gulfport, March 20, July 18; 1 ♀ im., Deer Island, August 10. 1943: 1 ♂, 2 ♀, Deer Island, March 14, April 28, August 26.

The Hooded Warbler is a common summer resident on the Mississippi coast, but is limited in its distribution to the stretches of woods bordering the streams on the mainland. The first birds usually appear in the spring shortly after the middle of March, and by the end of the month the species is present wherever it will later nest. On Deer Island it is plentiful throughout all of April, and was noted there as late as May 6 (1938). I also recorded it on Cat Island between the dates of March 29 (1942) and April 25 (1937), and on Ship Island May 1, 1940. The fall migration begins rather early, for an occasional bird reappears on Deer Island by the end of July (July 30, 1941), and in August it is frequently seen there about the palmetto thickets in the open pine woods The earliest date of arrival in the spring is March 14 (1943); the latest date of departure in the fall is November 8 (1941).

Wilsonia pusilla pusilla (Wilson)
Wilson Warbler

1939: 1 ♀, Deer Island, October 7; 1 ♂, Saucier, October 12. 1940: 3 ♂, 1 ♀, Deer Island, September 12 and 26, October 5; 1 ♀, Cat Island, September 13.

The Wilson Warbler is a scarce and extremely erratic fall transient on the Mississippi coast. There are years when this species is not recorded, and only in 1940 was it of more than casual occurrence. I have but one other record in addition to the specimens listed above, a female seen on Deer Island on September 22, 1942.

Wilsonia pusilla pileolata (Pallas)
Northern Pileolated Warbler

1936: 1 ♂, Gulfport, September 26.

This specimen was compared with typical males of *pileolata* taken within the breeding range of this western form, and was found to agree in every respect. This is apparently the farthest east that this subspecies has been recorded.

Wilsonia canadensis (Linnaeus)
Canada Warbler

1935: 1 ♂, Saucier, September 27. 1936: 1 ♀, Deer Island, August 31. 1937: 1 ♀, Gulfport, May 10; 1 ♂ im., Gulfport, August 30; 1 ♀, Deer Island, September 1. 1938: 1 ♀, Gulfport, September 4. 1939: 1 ♀, Gulfport, September 15; 1 ♀, Cat Island, October 3; 1 ♂ im., Deer Island, October 13. 1940: 1 ♂, Deer Island, September 12; 1 ♀, Cat Island, September 13; 1 ♀, Saucier, September 30. 1941: 1 ♀, Deer Island, September 20.

The Canada Warbler is a rather scarce transient on the Mississippi coast. In the spring it was recorded only once, the female seen on May 10, 1937, in woods bordering a stream near Gulfport. It occurs regularly in the fall, but is noted then at rather infrequent intervals, usually appearing in early September and being rarely observed later than the first of October. The extreme dates of occurrence for the fall migration are August 30 (1937) and October 13 (1939).

Setophaga ruticilla ruticilla (Linnaeus)
American Redstart

1936: 1 ♂, 1 ♂ im., 1 ♀ im., Woolmarket, April 1, July 30, August 11; 5 ♂, 2 ♂ im., 1 ♀ im., Gulfport, April 8 and 25, May 5, July 29, August 15, 22 and 29, September 26; 1 ♀, Saucier, July 28; 1 ♀, Horn Island, August 21. 1937: 2 ♂, 3 ♂ im., Gulfport, March 27, August 1, 10 and 23, September 26; 1 ♀ im., Woolmarket, July 22; 2 ♂, Saucier, August 20 and 31. 1938: 1 ♂, 1 ♂ im., 1 ♀, Gulfport, July 29 and 31, August 28; 1 ♀, Deer Island, August 18. 1940: 1 ♂, Deer Island, April 13. 1941: 3 ♂, 1 ♂ im., 1 ♀ Gulfport, July 28, August

3 and 23, October 17; 2 ♂, 1 ♀, Deer Island, July 30, August 10 and 16. 1942: 3 ♂, 1 ♂ im., 1 ♀, 1 ♀ im., Gulfport, July 16, August 9, 14, 19 and 22; 1 ♂, 1 ♂ im., Deer Island, August 6, September 7. 1943: 1 ♂, Deer Island, April 8; 3 ♂, Gulfport, August 21, 22 and 27.

The Redstart is a common transient on the Mississippi coast both in the spring and in the fall, and equally numerous on the mainland and on all the islands. In the spring it is usually present from early in April until almost the middle of May, while in the fall it invariably appears the latter part of July and is plentiful then until the last of October. It is always interesting to note the regularity with which the adult males arrive in the fall. The first birds to appear are always young of the year, and although a few adult females are seen early in August, it is not until after the middle of the month that the males are observed. During September the Redstart occurs in its greatest numbers, and there is usually an occasional day after the middle of the month (notably September 26, 1936, September 26, 1940, and September 23, 1942) when these warblers are found literally everywhere. My extreme dates of occurrence for this species in the spring are March 27 (1937) and May 14 (1942), and in the fall, July 16 (1942) and November 10 (1937).

Setophaga ruticilla tricolora (Müller)

Northern Redstart

1935: 1 ♂, Saucier, October 23. 1936: 1 ♀, Saucier, September 24; 1 ♂, Gulfport, October 9. 1937: 1 ♀, Ship Island, May 7; 1 ♂, 1 ♀, Gulfport, May 9, November 10; 1 ♂, Horn Island, May 12. 1938: 2 ♂, Gulfport, April 8, August 27; 1 ♀, Deer Island, November 5. 1939: 3 ♂, Gulfport, May 8, October 6 and 8; 1 ♂, Deer Island, May 9; 2 ♂, Cat Island, September 21, October 3. 1940: 1 ♀, Ship Island, April 10; 2 ♂, Deer Island, April 26 and 30; 1 ♀, Gulfport, October 25. 1941: 1 ♂, 1 ♀, Deer Island, May 7, November 4; 1 ♂, Gulfport, October 2. 1942: 3 ♂, 1 ♀, Deer Island, May 14, September 28, October 26; 1 ♂, 1 ♀, Gulfport, August 30, September 23. 1943: 1 ♂, 2 ♀, Deer Island, April 8, May 8 and 12; 1 ♂, Gulfport, August 21.

Although this subspecies of the Redstart has until now been granted recognition in only a few published works, it is unquestionably a valid race. When Müller's name was revived and attached to a definite population of Redstarts by Oberholser (1938: 572) the breeding range was thought to be confined to western portions of the United States and Canada. In 1942 and 1943, I had the privilege of spending the month of June in Newfoundland, engaged in a study of bird life of this little-known country. Among the specimens taken was a small series of Redstarts, including both adult males and females and subadult males. These proved,

on examination, to have all the characters attributed to *tricolora*. They were noticeably different from the breeding Redstarts of the southeastern United States with which I had been long familiar. Later, when opportunity offered, a more detailed study was made of specimens taken throughout much of the breeding range of this species, and it was apparent at once that *tricolora* is a well-marked race, with a breeding range extending across the continent from British Columbia to Newfoundland. This fact explains the occurrence of this supposedly western race as a common transient in the eastern states, and should eliminate the main objection raised by some taxonomists with respect to recognizing two races of *Setophaga ruticilla*. No attempt was made to work out the breeding ranges of the two forms; so the southern limits of *tricolora* are yet to be determined when further material is available for study.

In the adult males, *tricolora* can be distinguished from *ruticilla* by its smaller size and by the noticeably smaller orange speculum. The female and subadult male are even more distinct, being not only smaller, but also having the upper parts gray rather than olive green. The yellow speculum is likewise much reduced, in some cases being so obscure that only a faint trace of yellow is visible.

On the basis of the specimens taken on the Mississippi coast the northern race arrives and departs much later, both in the spring and in the fall. I have no records for *tricolora*, for either March or July, but birds taken after the first week in May and after the middle of October are invariably referable to that race.

Setophaga ruticilla × *Compsothlypis americana*
Redstart-Parula Warbler Hybrid

On August 30, 1938, a female warbler was taken on Cat Island that I was unable to identify at the time. Comparisons later, however, with pertinent material in the United States National Museum revealed that this specimen was without question a hybrid between the Redstart (*Setophaga ruticilla*) and the Parula Warbler (*Compsothlypis americana*). Superficially it resembles a female Redstart, but close scrutiny shows characters foreign to the genus *Setophaga*, and possessed only by the genus *Compsothlypis*. This is apparently the first known example of hybridization between the two species. For a detailed description of this unusual specimen see Burleigh (1944).

Family PLOCEIDAE

PASSER DOMESTICUS DOMESTICUS (LINNAEU)
ENGLISH SPARROW

1936: 2 ♂, Gulfport, May 3, November 19.

This ubiquitous species is a common bird about all the towns on the mainland, but was not recorded on any of the islands.

Family ICTERIDAE

DOLICHONYX ORYZIVORUS (LINNAEUS)
BOBOLINK

1937: 2 ♀, Horn Island, May 12. 1942: 1 ♂, 1 ♀, Deer Island, May 8; 1 ♂, 1 ♀, Cat Island, May 10. 1943: 1 ♂, Gulfport, May 13.

The Bobolink is an extremely scarce spring transient on the Mississippi coast, an occasional small flock of these birds usually being seen in May in the wide stretches of salt marsh on the islands. The earliest record is that of a single male seen on Deer Island on April 30, 1938. I did not observe the species in the fall.

STURNELLA MAGNA ARGUTULA BANGS
SOUTHERN MEADOWLARK

1935: 6 ♂, 6 ♀, Saucier, June 4, July 24, August 14, October 15 and 28, November 4, 7, 12, 14, and 27, December 3. 1936: 1 ♂, 2 ♀, Saucier, January 6 and 20, November 23; 1 ♂, Gulfport, December 25. 1937: 1 ♂, Saucier, December 7. 1938: 1 ♀, Cat Island, March 21. 1939: 2 ♀, Deer Island, October 21, November 4; 1 ♂, Saucier, November 15. 1940: 2 ♀, Saucier, January 23, February 15. 1942: 3 ♂, Gulfport, January 22, February 11, November 30.

The Meadowlark is a common resident species on the Mississippi coast, and is one of the characteristic birds of the open pine woods on the mainland. It does not breed on the islands, and occurs there as a rather scarce and irregular straggler, my few records being as follows: Cat Island—a female on March 21, 1938; one bird on December 13, 1939; Deer Island—a female on October 21, 1939, a female on November 4, 1939, two birds on February 15, 1942. Since there is the possibility of the northern race, *magna,* being present during the winter months, an occasional bird was taken from the small flocks of Meadowlarks seen at this season of the year. Without exception they proved typical, both in measurements and plumage, of the southern race *argutula.*. If the northern form occurs at all it must be exceedingly scarce in the southern part of the State.

Sturnella neglecta Audubon
Western Meadowlark

1936: 1 ♀, Deer Island, October 13. 1937: 1 ♂, Saucier, November 29.

The female taken on Deer Island was feeding alone at the edge of a stretch of beach and was easily recognized by its pale coloration. The day the male was collected at Saucier, three of these birds were found feeding with other meadowlarks in a pecan orchard. Their characteristic notes immediately attracted my attention, but to verify the identification, one was collected. The others remained at this place for over two weeks, being last noted on December 14.

Agelaius phoeniceus phoeniceus (Linnaeus)
Eastern Red-wing

1935: 1 ♂, Saucier, December 13. 1936: 1 ♂, Bay St. Louis, January 11; 1 ♂, 4 ♀, Saucier, November 14 and 17. 1937: 2 ♂, 1 ♀, Gulfport, January 6, February 8. 1938: 2 ♂, Gulfport, March 11, April 4; 1 ♂, 8 ♀, Saucier, March 25, April 4, November 7, December 27. 1939: 1 ♂, 1 ♀, Saucier, February 3, November 17. 1940: 1 ♂, 2 ♀, Saucier, January 29, March 14, November 8; 1 ♂, Gulfport, February 3. 1941: 1 ♂, Biloxi, February 28; 6 ♂, Gulfport, March 7. 1942: 2 ♂, Gulfport, February 19, December 31.

This northeastern race of the Red-wing is a common winter resident on the Mississippi coast, although it was recorded only on the mainland. It was not taken on any of the islands, and apparently is reluctant to cross even the mile of open water to Deer Island. The first small flocks appear in the fall early in November, and for an interval of five months then are frequently seen in the stretches of open pine woods. On the basis of actual specimens taken, the earliest date of arrival in the fall is November 7 (1938); the latest date of departure in the spring is April 4 (1938).

Agelaius phoeniceus littoralis Howell and van Rossem
Gulf Coast Red-wing

1935: 1 ♀, Bay St. Louis, October 22. 1936: 2 ♂, 1 ♀, Deer Island, November 13. 1937: 2 ♂, Saucier, November 19, December 9; 1 ♀, Gulfport, December 29. 1938: 1 ♀, Bay St. Louis, March 18; 1 ♂, Deer Island, April 16; 1 ♂, 1 ♀, Gulfport, April 29, June 7; 2 ♀, Saucier, May 4. 1940: 2 ♀, Gulfport, January 26, December 3. 1941: 1 ♂, 1 juv. ♂, Gulfport, May 22, July 31; 1 ♀, Deer Island, November 26. 1942: 1 ♀, Deer Island, February 13. 1943: 1 ♂, Deer Island, February 20.

This well-marked race is a common resident bird on the Mississippi coast, and is equally numerous on the mainland and on all the islands.

During the winter months small flocks are frequently seen in the numerous stretches of marsh; from early in March until late in summer there are no such areas where at least a few pairs of these birds cannot be found nesting.

Icterus spurius (Linnaeus)
Orchard Oriole

1936: 1 ♂, Saucier, March 27. 1937: 1 ♀, Saucier, September 10. 1938: 1 ♂, Gulfport, April 17. 1939: 1 ♂, Ship Island, May 24. 1940: 1 ♂, Ship Island, April 10; 1 ♂ im., Biloxi, June 29. 1941: 1 ♂, Gulfport, May 20. 1942: 1 ♂, Deer Island, March 26.

The Orchard Oriole is a common summer resident on the Mississippi coast, occurring both on the mainland and on all the islands. The first birds usually appear the latter part of March, and within a week these orioles are fairly plentiful. Departure in the fall is rather early, for by early in August only an occasional bird is seen; September records are few. The earliest date of arival in the spring is March 21 (1941); the latest date of departure in the fall is September 10 (1937).

Icterus galbula (Linnaeus)
Baltimore Oriole

1936: 1 ♂ im., Deer Island, September 22. 1937: 1 ♀, Cat Island, April 25. 1939: 1 ♀, Gulfport, September 7; 1 ♂ im., Saucier, September 8. 1940: 1 ♂, Ship Island, April 10; 1 ♀, Gulfport, September 11; 1 ♂ im., 1 ♀, Deer Island, September 12 and 26; 1 ♂, Cat Island, September 13. 1941: 1 ♂, Deer Island, April 1. 1942: 2 ♀, Deer Island, May 14, August 24. 1943: 1 ♂, 1 ♀, Deer Island, April 19, August 26.

In the spring the Baltimore Oriole is a rather scarce transient on the Mississippi coast. There were frequent years when this species was not noted. My few records are all for the islands. An adult male and a female were seen on Cat Island on April 25, 1937; two adult males and a female were observed on Ship Island on April 10, 1940; and on Deer Island an adult male was noted April 1, 1941, a female May 14, 1942, and two males April 19, 1943. In the fall it is fairly common and of regular occurrence, usually being seen at frequent intervals throughout most of September. Only once did it appear as early as the latter part of August (August 24, 1942), and I have but one record for October (October 7, 1941). At this season of the year it was observed as often on the mainland as on the island.

Euphagus carolinus (Müller)
Rusty Blackbird

1935: 2 ♀, Saucier, December 6. 1938: 2 ♀, Bay St. Louis, March 18; 1 ♀, Saucier, November 8. 1940; 1 ♂, Saucier, December 20. 1941: 5 ♂, Gulfport, March 14 and 25, April 2 and 8, December 15. 1942: 1 ♂, Gulfport, January 20; 1 ♂, Bay St. Louis, February 14.

The Rusty Blackbird is a rather uncommon winter resident on the Mississippi coast, and is extremely erratic in its appearance. Although it appeared in the fall as early as the first week in November, it was often late in December before the first flocks were seen. In the spring it is rarely observed after the last of February. I have no records for the islands, the flocks noted during the winter months being found in the stretches of open swampy woods on the mainland. The earliest date of arrival in the fall is November 8 (1938); the latest date of departure in the spring is April 8 (1941).

Euphagus cyanocephalus (Wagler)
Brewer Blackbird

1935: 1 ♀, Saucier, December 11. 1936: 4 ♂, 2 ♀, Saucier, January 3, December 7 and 17. 1937: 3 ♂, 2 ♀, Saucier, February 6, November 17 and 23, December 17; 1 ♀, Gulfport, November 29. 1938: 2 ♂, Saucier, January 24, November 23; 5 ♀, Gulfport, March 22, April 5. 1939: 3 ♂, 1 ♀, Saucier, February 20, November 9, December 15. 1940: 1 ♂, Saucier, December 4. 1941: 1 ♂, 2 ♀, Gulfport, March 20, November 27. 1942: 1 ♂, Saucier, January 8.

Although heretofore unrecorded from the southern part of the State, the Brewer Blackbird was found to be a fairly common winter resident on the Mississippi coast. Each fall flocks of twenty to at times a hundred or more of these birds appear about the pecan orchards and cultivated fields in November, and are frequently seen then until the following March or early in April. Weather conditions further north apparently influence to a large degree the time of their arrival in the fall, for a late winter usually results in their appearing the last of November or even early December. On the other hand, an occasional flock was observed shortly after the first of November when the first touch of winter was early. The relative abundance of this blackbird is rather surprising in view of the total absence of previous records. It is possible that its presence at this time is due to a gradual extension of range in recent years, for the preference it shows for plowed fields and the proximity of grazing cattle makes it a species not easily overlooked. Whatever the reason, it is certainly a common bird now in the southern part of the State throughout the winter months. The earliest date of arrival in

the fall is November 9 (1939); the latest date of departure in the spring is April 5 (1938).

Cassidix mexicanus major (Vieillot)
Boat-tailed Grackle

1936: 1 ♀, Deer Island, February 28; 2 ♂, Bay St. Louis, March 3, June 6; 1 ♀, Deer Island, October 30, 1937: 2 ♂, Deer Island, February 22; 2 ♂ im., Bay St. Louis, November 11. 1938: 2 ♂, 1 ♀, Cat Island, January 15; 1 ♂, Bay St. Louis, March 18. 1939: 1 ♀, Deer Island, February 22. 1940: 1 ♀, Deer Island, January 25. 1941: 1 ♀, Pascagoula, October 26.

This large grackle is a common breeding bird on the Mississippi coast, but since it occurs only about the larger stretches of open salt marsh, it is rather local in its distribution during the summer months. It is one of the few species that is more numerous on the islands than on the mainland. Despite the comparatively mild winters and no apparent scarcity of food, very few of these birds remain on this part of the coast during the winter months. The last small flocks are usually seen late in October, and it is the last of February or even later before they reappear again. On Deer Island I noted the Boat-tailed Grackle only once during the winter months. A flock of twelve birds, all females, was seen there January 13, 1940, and at intervals for the following two weeks. However, it is possible that these grackles winter more commonly on the outer islands, for on Cat Island January 15, 1938, a flock of forty birds, both males and females, was noted, and on Horn Island January 21, 1939, several small flocks were observed. On the mainland, and on Deer Island, February 22 is the average date of arrival in the spring.

Quiscalus quiscula quiscula (Linnaeus)
Florida Grackle

1936: 1 ♂, Gulfport, March 4. 1937: 2 ♂, Saucier, February 13, May 6; 2 ♂, Lyman, May 5; 3 ♂, Bay St. Louis, May 6; 2 ♂, 2♀, Gulfport, May 8; 3 ♂, Ocean Springs, May 11. 1938: 1 ♂, Deer Island, March 14; 1 ♂, 1 ♀, Gulfport, March 15. 1939: 1 ♂, Gulfport, February 21; 1 ♂, Saucier, June 1. 1940: 1 ♂, Bay St. Louis, March 1; 1 ♂, Deer Island, May 21. 1941: 1 ♂, Biloxi, February 18; 2 ♂, Gulfport, June 22, November 6. 1942: 1 ♂, 2 ♀, Gulfport, January 24, February 18, October 27. 1943: 1 ♂, Gulfport, March 3; 1 ♀, Lyman, March 10.

The Florida Grackle is a common summer resident on the Mississippi coast, small breeding colonies being found in many of the stretches of swampy woods on the mainland. It does not nest on the islands, and was noted only on Deer Island, where it is merely of casual occurrence during the spring months. Over an interval of eight years I recorded it there on only three occasions, three birds being seen on June 30, 1937, a

flock of five on March 14, 1938, and two on May 21, 1940. On the mainland the first birds usually appear shortly after the middle of February, but it is several weeks later before this species is finally fairly plentiful. During the late summer months these grackles decrease perceptibly in number, and only an occasional small flock is seen after the middle of September. Unusually late records are those of two birds noted at Saucier November 9, 1938, a flock of approximately twenty at Gulfport November 6, 1941, and another flock of possibly forty at Gulfport October 27, 1942. My only winter records are single birds seen at Gulfport December 21, 1941, and January 24, 1942. The earliest date of arrival in the spring is February 13 (1937); however, in three different years (1941-42-43), the first males appeared on February 17.

In connection with his intensive study of the genus *Quiscalus,* Frank M. Chapman critically examined a small series of twelve breeding males from the Mississippi coast taken in 1937. He refers (Chapman, 1939) four of these to typical *quiscula,* four to the race he calls *stonei,* and four he considers intermediate in their characters. If this sample can be accepted as characteristic of the breeding population of the southern part of the State, there is no question then as to southern Mississippi being an area of intergradation between the two species of *Quiscalus.* This conclusion was later substantiated by the examination of additional material, the characters of *quiscula* and *versicolor* being present in varying degree in the breeding males available for study.

Quiscalus versicolor Vieillot
Bronzed Grackle

1939: 1 ♂, Saucier, December 11. 1940: 1 ♂, 1 ♀, Saucier, January 23; 2 ♂, Biloxi, January 25, February 21; 1 ♂, Gulfport, February 3.

The typical Bronzed Grackle was noted on the Mississippi coast only during the winter of 1939-40. Its presence then apparently was a result of the abnormally low temperatures and deep snows that prevailed that year throughout much of its normal winter range. Under ordinary conditions it is doubtful if a bird as hardy as the Bronzed Grackle ever has an incentive to come this far south. The numerous flocks that were seen from December, 1939, until almost the last of February, 1940, were not large so far as the actual number of individuals concerned. The one exception was the flock seen at Saucier on January 23 in which there were fully three hundred of these birds. Extreme dates of occurrence were December 11 and February 21.

MOLOTHRUS ATER ATER (BODDAERT)
EASTERN COWBIRD

1935: 1 ♂ im., 1 ♀ im., Gulfport, September 1; 1 ♂, 3 ♀, Saucier, November 29, December 6 and 23. 1936: 1 ♂, Gulfport, April 11; 1 ♂, 4 ♀, Saucier, November 6 and 14. 1937: 1 ♀, Gulfport, February 8; 1 ♀, Saucier, November 19. 1938: 1 ♀, Gulfport, April 13. 1940: 2 ♂, 1 ♀, Gulfport, January 26, February 3. 1941: 1 ♂, Gulfport, March 6. 1942: 3 ♂, Gulfport, January 16; 1 ♂ im., August 11. 1943: 1 ♂, Lyman, May 13.

The Cowbird is a resident species in southern Mississippi, but on the coast it is rather scarce during the breeding season. The numerous flocks that are seen during the winter months are gone by the end of March, and until November, when they reappear again, only an occasional bird is observed. It is doubtful if over a dozen Cowbirds remain each spring on the coast as breeding birds. No eggs or young were found in the nests of other birds, but the presence of adults throughout the spring months, and of fully grown young late in July and in August, leaves little question as to whether this species nests here.

The birds resident on the Gulf coast were recently described as a new subspecies and given the name *buphilus* (Oberholser, 1938). Critical examination of breeding birds taken on the coast, however, revealed no one character whereby they could be distinguished with certainty from *ater*. They are not appreciably different in size, and the bill character, stouter than in *ater*, is not constant. To some extent they are intermediate between *obscurus* and *ater*, but are not sufficiently different to warrant recognition as a distinct race. Accordingly the name *buphilus* is not considered applicable to the Cowbirds resident in southern Mississippi.

Family THRAUPIDAE

PIRANGA LUDOVICIANA (WILSON)
WESTERN TANAGER

1940: 1 ♀, Gulfport, October 25.

The specimen listed above is the one record for the occurrence of this species on the Mississippi coast. It was feeding alone in woods bordering a stream, and was quiet and rather inconspicuous.

PIRANGA OLIVACEA (GMELIN)
SCARLET TANAGER

1935: 2 ♂, Saucier, October 11, November 13. 1936: 1 ♂, Deer Island, April 18; 1 ♀, Woolmarket, September 25. 1938: 1 ♂, Saucier, May 3. 1939: 1 ♂,

Saucier, September 23. 1940: 1 ♂, Gulfport, September 29. 1941: 1 ♂, Deer Island, April 3; 1 ♂, Gulfport, September 22. 1942: 2 ♂, Gulfport, May 9 and 15; 1 ♂, 1 ♀, Deer Island, May 8 and 14. 1943: 1 ♂, Deer Island, April 16.

The Scarlet Tanager is a fairly common transient on the Mississippi coast, being equally numerous both in the spring and in the fall. On the mainland it is restricted almost entirely to woods bordering the streams, whereas on the islands, it feeds to a large extent in the live oaks and only an occasional bird is seen in the open pine woods. In the spring it is most frequently seen late in April and early in May, and in the fall late in September and early in October. The extreme dates of occurrence for the spring migration are April 3 (1941) and May 15 (1942), and for the fall migration, September 12 (1937) and November 13 (1935).

Piranga rubra rubra (Linnaeus)

Summer Tanager

1935: 1 ♂ im., Saucier, July 11; 1 ♂, Gulfport, October 25. 1936: 3 ♂, Saucier, April 3 and 9, September 18. 1938: 1 ♀, Gulfport, April 6. 1939: 1 ♂, Cat Island, October 3; 1 ♀, Gulfport, October 20. 1940: 1 ♂, Ship Island, April 10; 1 ♂, Deer Island, April 20; 1 ♂, Biloxi, June 30; 1 ♂ im., Cat Island, September 13. 1941: 1 ♂, 1 ♀, Deer Island, May 1, August 9; 1 ♂, Gulfport, September 26. 1942: 2 ♀, Deer Island, May 7, August 15. 1943: 1 ♂, Gulfport, May 14; 1 ♀, Deer Island, August 26.

The Summer Tanager is a fairly common summer resident in southern Mississippi, but is rather scarce in the immediate vicinity of the coast. Only at Biloxi, in a grove of live oaks bordering the bay, was it actually found nesting. It may have been overlooked elsewhere. At Saucier, it is one of the characteristic birds of the open pine woods. In the spring the first birds usually appear early in April, and within a few days these tanagers are already fairly plentiful. They do not nest on the islands, but are present there in varying numbers throughout all of April, and not infrequently through the first week in May. On Deer Island they were noted as late as May 7 (1941 and 1942), while on Cat Island they were recorded April 25, 1937, and May 10, 1942, and on Ship Island May 1, 1940. The fall migration apparently begins rather early, for an occasional bird always appears on Deer Island shortly after the middle of August (one female was seen as early as August 9 in 1941), and by the end of the month a few birds are invariably present there. The earliest date of arrival for this species in the spring is April 3 (1936 and 1941); the latest date of departure in the fall is October 25 (1935).

Family FRINGILLIDAE

RICHMONDENA CARDINALIS CARDINALIS (LINNAEUS)
EASTERN CARDINAL

1935: 3 ♂, Saucier, May 10, July 24, December 6; 2 ♂, Gulfport, September 21, December 25. 1936: 1 ♂, 1 ♀, Gulfport, January 1. 1937: 1 ♂, Cat Island, February 24. 1938: 1 ♂ im., July 10. 1939: 1 ♂, Gulfport, May 25; 2 ♂, 1 ♀, Cat Island, December 13. 1940: 1 ♂, 1 ♀ im., Deer Island, January 31, June 28. 1941: 1 ♀, Biloxi, October 10. 1942: 5 ♂, 2 ♀, Cat Island, January 25, March 16; 3 ♂, Gulfport, January 27, February 21, December 27; 1 ♂, Saucier, January 28; 2 ♂, Pass Christian, December 5; 1 ♂, Ocean Springs, December 28. 1943: 1 ♂, Biloxi, January 8; 1 ♂, Gulfport, February 21; 1 ♂, 1 ♀, Deer Island, March 2 and 19.

The Cardinal is a common resident species on the Mississippi coast, occurring practically everywhere there are thickets and stretches of underbrush affording shelter and nesting sites. It is found both on Deer Island and on Cat Island, but was never noted on the other islands. Its presence on Cat Island, 9 miles offshore, proved rather unexpected, yet it is thoroughly established and as common there as on the mainland. Breeding activities apparently begin late in March, for young already out of the nest were seen on Deer Island on April 19, 1943.

A critical examination of the small series listed above showed that the morphological characters of the Cardinals found in southern Mississippi are somewhat intermediate; whereas they tend toward *magnirostris,* they are closer to typical *cardinalis.* The bill measurements in both sexes are consistently small when compared with *magnirostris,* although the females show a tendency toward the paler upper parts characteristic of the race described from southern Louisiana. On the other hand, the Mississippi coast birds average smaller than either *magnirostris* or *cardinalis,* in which respect they approach *floridana.* Since none of the characters are constant I consider it feasible to refer the coast birds to the nominate race which the average specimen most closely resembles.

HEDYMELES LUDOVICIANUS (LINNAEUS)
ROSE-BREASTED GROSBEAK

1935: 1 ♂, Deer Island, October 7; 1 ♂, Saucier, October 19. 1936: 1 ♀, Gulfport, May 7. 1937: 1 ♀, Gulfport, September 27. 1939: 1 ♀, Gulfport, May 8; 1 ♀, Deer Island, October 13; 1 ♂ im., Gulfport, October 16. 1940: 1 ♀, Biloxi, April 25. 1941: 1 ♂, Deer Island, May 7. 1942: 1 ♂, Cat Island, May 10 (Gregor Rohwer).

This handsome grosbeak is a rather uncommon but regular transient on the Mississippi coast, appearing in small numbers each year on the

mainland and on the islands. Ordinarily it is not recorded more than two or three times in the spring or in the fall, and although small flocks of three to five birds are sometimes noted, more often than not only a single bird is seen. The extreme dates of occurrence in the spring are April 15 (1943) and May 13 (1941), and in the fall, September 27 (1937 and 1940) and October 19 (1935 and 1937).

Guiraca caerulea caerulea (Linnaeus)
Eastern Blue Grosbeak

1935: 1 ♂, 4 ♀, Gulfport, September 21, October 15 and 25; 1 ♀, Deer Island, September 28. 1936: 1 ♂, Saucier, April 24. 1937: 1 ♂, Saucier, April 28; 1 ♀, Gulfport, September 29. 1939: 1 ♂ im., Saucier, October 10. 1940: 3 ♂, 1 ♀, Deer Island, April 20, May 10, September 12, October 19; 1 ♂, Ship Island, May 1; 1 ♂, Gulfport, May 11. 1941: 1 ♀, Gulfport, September 17. 1943: 1 ♂, 1 ♀, Deer Island, April 28, May 8; 1 ♂, Biloxi, April 30.

The Blue Grosbeak is a fairly common transient on the Mississippi coast, small flocks being seen at frequent intervals each spring and fall both on the mainland and on the islands. They are rarely found far from thickets or stretches of underbrush, but otherwise are observed equally often in the open pine woods, at the edges of the streams, or about cultivated fields or pastures. The usual flock contains from three to eight individuals, the most notable exception being a flock seen at Gulfport September 21, 1935, in which there were approximately thirty of these birds. The extreme dates of occurrences in the spring are April 14 (1940) and May 12 (1943), and in the fall, September 12 (1940) and October 26 (1935).

Passerina cyanea (Linnaeus)
Indigo Bunting

1935: 1 ♂, Saucier, October 3. 1936: 1 ♂, Woolmarket, April 7. 1937: 1 ♂, 2 ♀, Gulfport, March 27, November 3 and 7. 1939: 1 ♀ im., Saucier, November 3. 1940: 3 ♀, Deer Island, May 13 and 25, October 26. 1941: 1 ♂, Gulfport, March 16; 1 ♀, Deer Island, October 29. 1942: 1 ♀, Gulfport, December 13.

The Indigo Bunting is a common transient on the Mississippi coast. Numerous small flocks are seen in the spring and in the fall both on the mainland and on the islands. In the spring the first individuals usually appear early in April, rarely in March, and small flocks are noted almost daily then about thickets and stretches of underbrush until after the first week in May. They reappear again the latter part of September, are soon plentiful, and remain so until the last of October or early in November. Although single birds are observed from time to time, these buntings are most often seen in flocks numbering from five to twelve

individuals. The extreme dates of occurrence in the spring are March 16 (1941) (Gulfport) and May 25 (1940) (Deer Island), and in the fall, September 22 (1942) (Deer Island) and November 7 (1937) (Gulfport). I have one record for the occurrence of this species on the coast during the winter months. On December 13, 1942, a female was found feeding with Swamp Sparrows in underbrush at the edge of a stream near Gulfport.

Passerina ciris ciris (Linnaeus)
Eastern Painted Bunting

1936: 2 ♂, Gulfport, April 8 and 12; 1 ♂, Saucier, April 20. 1937: 1 ♂ im., Gulfport, September 25. 1940: 1 fledgling ♂, Pass Christian, June 26. 1941: 1 ♂, Gulfport, October 2. 1942: 1 ♂ im., Deer Island, September 26. 1943: 1 ♂, Deer Island, April 12; 1 ♀, Deer Island, November 1.

The Painted Bunting is an extremely scarce breeding bird on the Mississippi coast, and is a rather scarce transient both in the spring and in the fall. Each year a pair of these birds nest near Pass Christian. Until 1942 I knew of no other place where this species occurred during the summer months. That spring another pair was found nesting a few miles west of Biloxi. Their venture was apparently ill-fated for the following year no birds were present at the same place late in May. Both at Gulfport and on Deer Island an occasional bird is seen in the spring and again in the fall, but their appearance is rather erratic and, at times, somewhat unexpected. The extreme dates of occurrence for the transients in the spring are April 8 (1936) and April 26 (1940), and in the fall, September 25 (1937) and November 1 (1943). A female noted on Deer Island on July 24, 1940, was apparently a breeding bird from the mainland that had temporarily wandered offshore.

Passerina ciris pallidior Mearns
Western Painted Bunting

1939: 1 ♀, Deer Island, May 9.

This female Painted Bunting was compared with typical breeding specimens of *pallidior*, and was found to agree in every respect.

Spiza americana (Gmelin)
Dickcissel

1940: 1 ♂, Saucier, September 30.

Although the Dickcissel breeds commonly further north in the State, it is an extremely rare transient on the coast. I have only two records for

the occurrence of the species; both are from Saucier and both are recorded in the fall of 1940. A female was seen there on September 17, and a male was noted on September 30, feeding each time about a thicket at the side of the road.

Carpodacus purpureus purpureus (Gmelin)
Eastern Purple Finch

1939: 2 ♂, Deer Island, January 26 and 31. 1942: 1 ♂, 1 ♀, Gulfport, February 12, March 6.

The Purple Finch apparently occurs at rather infrequent intervals on the Mississippi coast during the winter months, for I have no records other than those listed above. The males taken on Deer Island were feeding with Goldfinches in the only sycamore growing on the island. The male and two females seen at Gulfport on March 6, 1942, were found in a privet hedge at the side of a road.

Spinus pinus pinus (Wilson)
Northern Pine Siskin

I have only one record for the occurrence of the Pine Siskin on the Mississippi coast. Two birds were seen near Saucier on November 27, 1936, feeding in alders fringing a stream in the open pine woods.

Spinus tristis tristis (Linnaeus)
Eastern Goldfinch

1935: 1 ♀, Gulfport, November 28. 1936: 1 ♂, Saucier, November 28. 1937: 1 ♂, Gulfport, December 25. 1938: 1 ♀, Woolmarket, March 30; 1 ♂, Gulfport, April 14. 1939: 1 ♀, Deer Island, January 31. 1942: 1 ♂, Deer Island, February 15.

The Goldfinch is a fairly common winter resident on the Mississippi coast. Small flocks appear in late November and are seen frequently until after the middle of the following April. Although never noted on the outer islands, this species is present each winter on Deer Island, and possibly occurs from time to time further offshore. The average flock is rather small, although at infrequent intervals as many as fifty of these birds were found feeding together at the edge of a field, or in woods bordering a stream. The earliest date of arrival in the fall is November 22 (1938); the latest date of departure in the spring is May 2 (1940).

Pipilo erythrophthalmus erythrophthalmus (Linnaeus)
Red-eyed Towhee

1935: 1 ♀, Saucier, October 28; 1 ♀, Gulfport, November 28. 1936: 1 ♀, Deer Island, November 13; 1 ♂, Gulfport, December 13. 1938: 1 ♂, Gulfport, December 25. 1939: 2 ♂, 1 ♀, Saucier, January 16 and 18, November 9; 1 ♀, Gulfport, November 2. 1940: 2 ♂, 1 ♀, Gulfport, February 10, March 7, April 15; 1 ♂, Ship Island. 1941: 2 ♀, Gulfport, December 19 and 21. 1942: 2 ♂, 2 ♀, Gulfport, October 29, December 2, 24, and 30; 1 ♀, Deer Island, October 31; 1 ♀, Biloxi, November 14. 1943: 1 ♂, Biloxi, February 22.

This northern race of *erythrophthalmus* occurs as a fairly common winter resident on the Mississippi coast, small flocks appearing late in October or early in November, and lingering in the spring until after the middle of April. To a very large extent they are found about thickets and stretches of underbrush on the mainland. Only an occasional bird is seen on the islands. A rather interesting record is that of the male collected on Ship Island on May 1, 1940. This was one of the days when adverse weather conditions resulted in a very heavy concentration of migrants on the island. The presence of the towhee with hundreds of trans-Gulf migrants suggested rather strongly that it had also crossed the Gulf. The late date makes this supposition even more plausible, although I realize that this species is not known to winter south of central Florida. The earliest date of arrival in the fall (based on actual specimens taken) is October 28 (1935); the latest date of departure in the spring (other than the Ship Island record) is April 15 (1940).

Pipilo erythrophthalmus canaster Howell
Alabama Towhee

1935: 1 ♂, Bay St. Louis, April 21; 1 ♀, Pass Christian, April 24; 4 ♂, 1 ♀, Saucier, May 9 and 10, July 11, October 15, December 13; 1 ♂, Gulfport, October 26. 1936: 2 ♂, Saucier, January 8, November 28; 1 ♀ im., Saucier, July 3; 2 ♂, 1 ♀, Gulfport, June 28, October 16, November 2; 1 ♀ im., Deer Island, July 21. 1937: 2 ♂, Gulfport, April 28, November 25. 1938: 2 ♂, 1 ♀, Gulfport, July 25 and 26, December 25; 1 ♂, Deer Island, December 21. 1939: 1 ♂, 1 ♀, Deer Island, February 22, June 21. 1940: 2 ♂, Gulfport, June 23, December 30; 1 ♂, Biloxi, July 3; 1 ♂, Deer Island, July 4; 2 ♀, Saucier, October 28 and 30. 1941: 1 ♀, Deer Island, February 13, June 7; 3 ♂, Gulfport, June 1 and 4, December 21; 1 ♂, Biloxi, June 17. 1942: 2 ♂, 1 ♀, Deer Island, January 6 and 21, May 1; 1 fledgling ♀, Deer Island, September 7; 1 ♀, Cat Island, January 25 (G. G. Rohwer); 1 ♂, Gulfport, February 12. 1943: 1 ♂, 1 ♀, Deer Island, February 24, April 28; 1 ♂, Gulfport, October 8. 1944: 1 ♂, Saucier, May 21; 1 ♂, 1 ♀, Deer Island, May 22.

This well-marked race, characterized by large size, heavy bill, and limited amount of white on the tail, is a common resident on the Mississippi coast. It is of widespread occurrence on the mainland where there are thickets or stretches of underbrush. Possibly half a dozen

pairs nest in the palmetto thickets on Deer Island, whereas on the other islands, lying farther offshore, this towhee is apparently largely of accidental occurrence. I recorded it only once on the outer islands; two females were noted on Cat Island on January 25, 1942. Since *canaster* is supposedly resident throughout its range, I might have been surprised to find these birds on Cat Island had I not already been convinced that in part of its range the race is migratory. A male taken at Gulfport on December 30, 1940, had light cream-colored irises, in striking contrast to the deep red irises of the birds resident on the coast. This feature identified the specimen as a migrant beyond any question. Another male taken on Deer Island on January 21, 1942, had orange irises, offering further proof that at least part of the winter population of *canaster* in this section consists of transients. Breeding activities appear to involve several broods each year. Fully grown young were observed in June, and as late as September 7 (1942); a female with three fledglings, out of the nest only a day or two, was seen on Deer Island.

Passerculus sandwichensis savanna (Wilson)
Eastern Savannah Sparrow

1936: 1 ♀, Saucier, November 20. 1937: 1 ♂, Saucier, November 23. 1938: 2 ♀, Saucier, March 19; 1 ♀, Deer Island, November 20. 1939: 2 ♀, Deer Island, January 31, October 28; 1 ♂, 1 ♀, Saucier, February 24. 1940: 1 ♀, Saucier, January 18; 1 ♀, Cat Island, October 23. 1941: 1 ♀, Saucier, January 15; 1 ♀, Gulfport, February 19. 1942: 1 ♀, Gulfport, April 22; 1 ♀, Biloxi, December 3; 1 ♂, Ocean Springs, December 28. 1943: 1 ♂, Deer Island, February 20; 1 ♀, Gulfport, April 29.

The Savannah Sparrow is a common winter resident on the Mississippi coast, occurring both on the mainland and on all the islands where there is open country. The first birds usually appear in the fall shortly after the middle of October, and within a few weeks numerous small flocks are present in fields and pastures, and at the edges of salt marshes. In the spring no perceptible decrease is observed until the middle of April, and it is always the first week in May before the last bird disappears. The earliest date of arrival for this species in the fall is October 7 (1935); the latest date of departure in the spring is May 10 (1938).

Passerculus sandwichensis labradorius Howe
Labrador Savannah Sparrow

1935: 1 ♀, Gulfport, October 9; 1 ♂, Deer Island, November 8. 1940: 1 ♂, Deer Island, November 21.

The three specimens listed above were identified by John W. Aldrich as representing the race that breeds in Newfoundland and Labrador.

PASSERCULUS SANDWICHENSIS NEVADENSIS GRINNELL
NEVADA SAVANNAH SPARROW

1942: 1 ♀, Lyman, December 29.

James L. Peters examined the female specimen taken at Lyman and stated that it is typical of this westeern race.

PASSERCULUS SANDWICHENSIS OBLITUS PETERS AND GRISCOM
CHURCHILL SAVANNAH SPARROW

1935: 2 ♀, Saucier, November 6, December 13. 1936: 1 ♂, 1 ♀, Saucier, April 24, November 3; 1 ♀, Deer Island, May 9; 1 ♂, Woolmarket, December 29. 1937: 1 ♀, Cat Island, February 12; 1 ♀, Gulfport, May 1; 1 ♀, Saucier, December 30. 1938: 1 ♂, Gulfport, January 1; 1 ♂, Woolmarket, April 12; 1 ♀, Bay St. Louis, May 10. 1939: 1 ♂, Saucier, February 10; 1 ♀, Gulfport, November 8; 1 ♀, Deer Island, December 19. 1940: 1 ♂, 1 ♀, Saucier, February 23, November 8; 1 ♀, Bay St. Louis, May 4; 1 ♂, Biloxi, November 9. 1941: 1 ♀, Gulfport, October 15. 1942: 1 ♂, Saucier, January 8; 1 ♀, Gulfport, May 2; 1 ♂, Biloxi, December 3. 1943: 1 ♀, Gulfport, May 5.

On the basis of actual specimens taken, *oblitus* is decidedly the commonest of the five races of the Savannah Sparrow recorded from the Mississippi coast. It apparently does not appear in the fall until after the first of November, and is invariably the last to disappear in the spring. Without exception, birds collected in May were found to represent this well-marked subspecies.

PASSERCULUS SANDWICHENSIS MEDIOGRISEUS ALDRICH
SOUTHEASTERN SAVANNAH SPARROW

1935: 2 ♂, Saucier, December 6; 1 ♂, Gulfport, December 10. 1939: 1 ♀, Cat Island, November 1. 1940: 2 ♀, Saucier, January 15, November 19. 1941: 1 ♀, Saucier, January 27.

John W. Aldrich has identified the specimens listed above as *mediogriseus*, a race he recently described from the eastern United States (Aldrich, 1940). It is characterized by being darker and less rufescent than typical *savanna* of Nova Scotia and appears to be a valid race.

AMMODRAMUS SAVANNARUM PRATENSIS (VIEILLOT)
EASTERN GRASSHOPPER SPARROW

1935: 1 ♂, Saucier, November 6. 1936: 2 ♀, Gulfport, March 7, April 22; 1 ♂, 2 ♀, Saucier, March 13 and 27, December 31. 1937: 2 ♂, 2 ♀, Saucier, November 18, December 15 and 27. 1938: 1 ♂, 1 ♀, Saucier, March 19, November 22. 1939: 1 ♂, 3 ♀, Saucier, January 13, February 10 and 24. 1940: 1 ♀, Saucier, February 2. 1941: 1 ♀, Saucier, December 7.

The Grasshopper Sparrow is a fairly common winter resident on the Mississippi coast, but is rather local in its distrbution. I have no records

for the islands, and on the mainland I found it only in fields overgrown with broomsedge. Since it is rather secretive in its habits, it must be searched for in order to be seen. One or two can always be flushed, however, during the winter months in any field where the broomsedge is the predominating growth. In the fall it appears quite regularly the latter part of October or the first week in November, while in the spring it is rarely seen after the middle of April. The earliest date of arrival in the fall is October 26 (1938); the latest date of departure in the spring is April 22 (1936).

Ammodramus savannarum perpallidus (Coues)
Western Grasshopper Sparrow

1937: 1 ♂, Saucier, December 14.

The specimen listed above is the only record for the occurrence of this western race of the Grasshopper Sparrow on the Mississippi coast.

Passerherbulus caudacutus (Latham)
Leconte Sparrow

1937: 1 ♀, Saucier, April 8. 1938: 1 ♂, Gulfport, January 1. 1941: 1 ♂, Saucier, December 7 (Gregor Rohwer).

The Leconte Sparrow is a somewhat scarce winter resident on the Mississippi coast, and is limited entirely in its distribution to the mainland where it occurs in the larger fields that are overgrown with broomsedge. Since it virtually must be walked upon before it flies, it is difficult to see, and is possibly more common than my infrequent records indicate. It appears in the fall in November, and is present then in relatively small numbers until the following April; the extreme dates of occurrence are November 12 (1942) and April 8 (1937).

Passerherbulus henslowii henslowii (Audubon)
Western Henslow Sparrow

1935: 1 ♂, Saucier, December 9. 1942: 1 ♀, Saucier, March 12.

The Henslow Sparrow apparently occurs in rather limited numbers on the Mississippi coast during the winter months, but since it is extremely shy and secretive it is probably more common than my few records indicate. The two specimens collected were flushed from marshy spots in the open pine woods. Both proved to be typical of this western race.

Ammospiza caudacuta nelsoni (Allen)
Nelson Sparrow

1935: 2 ♂, Deer Island, October 7. 1936: 1 ♀, Gulfport, September 29; 1 ♀, Deer Island, September 30. 1938: 1 ♂, 1 ♀, Cat Island, January 15; 1 ♂, Gulfport, September 26. 1940: 1 ♀, Bay St. Louis, May 4; 1 ♀, Gulfport, October 8.

The Nelson Sparrow is a fairly common winter resident on the Mississippi coast, appearing in the fall the latter part of September, and lingering in the spring until after the first week in May. I never noted it except in the stretches of salt marsh, but in such sites it is present throughout the winter months, both on the mainland and on all the islands. The earliest date of arrival in the fall is September 26 (1938); the latest date of departure in the spring is May 8 (1942 and 1943).

Ammospiza maritima howelli (Griscom and Nichols)
Howell Seaside Sparrow

1935: 1 ♂ im., Pass Christian, July 10; 3 ♂, 1 ♀, 1 ♂ im., 2 ♀ im., Graveline Bayou, July 12; 2 ♀ im., Deer Island, August 16; 2 ♂, 3 ♀, Graveline Bayou, November 5. 1938: 1 ♂, 1 ♀, Cat Island, January 15; 1 ♂ im., 1 ♀ im., Gulfport, July 14 and 16. 1939: 1 ♂, 1 ♀, Deer Island, November 11. 1940: 1 ♀, Gulfport, October 24. 1941: 1 ♀ im., Gulfport, September 13; 2 ♂, Pascagoula, October 26; 1 ♀, Deer Island, October 29. 1942: 2 ♀, Deer Island, January 12, February 15. 1943: 1 ♂, Deer Island, May 1.

This Gulf coast race of the Seaside Sparrow is a fairly common resident species on the Mississippi coast, but is rather local in its distribution. One of its requirements during the breeding season seems to be the presence of clumps of sharp-pointed rushes (*Juncus*) in which to nest. Where this growth is lacking in stretches of salt marsh that are otherwise suitable, the species occurs only in rather limited numbers during the winter months. At the present time it is known to breed at only two localities on the mainland; at the mouth of the Pascagoula River, and on Graveline Bayou. Breeding colonies, however, are found on all the islands, with possibly the largest occurring on Cat Island. On Deer Island this species has been, for some unaccountable reason, always rather scarce. Never over a dozen pairs nest each year in the wide expanse of salt marsh at the eastern end of the island. During the summer months, these sparrows appear to wander about more or less, this being especially true of the young of the year. In July, sometimes rather early in the month, birds in immature plumage appear at Gulfport, and are noted in the marshes there throughout August and early September, and rarely later.

Ammospiza maritima fisheri (Chapman)
Louisiana Seaside Sparrow

1935: 2 ♂, Bay St. Louis, July 13; 1 ♂, Bay St. Louis, October 22. 1936: 3 ♂, Bay St. Louis, January 11, May 30. 1937: 1 ♀, Bay St. Louis, January 1. 1938: 1 ♀, Cat Island, January 15; 6 ♂, 5 ♀, Bay St. Louis, March 15 (G. M. Sutton); 1 ♀, Gulfport, November 4. 1940: 1 ♂, 1 ♀, Bay St. Louis, May 4.

The small series of Seaside Sparrows listed above, taken from the breeding colony west of Bay St. Louis, are closer to *fisheri* than to *howelli*. This extends the breeding range of *fisheri* into Mississippi for the first time, and marks the extreme eastern limits of this Louisiana race during the summer months.

Pooecetes gramineus gramineus (Gmelin)
Eastern Vesper Sparrow

1935: 1 ♂, Saucier, November 27. 1936: 2 ♂, 2 ♀, Saucier, January 7, March 6, November 2, December 8. 1937: 1 ♀, Saucier, February 18; 1 ♀, Deer Island, November 1; 1 ♀, Gulfport, December 26. 1938: 1 ♀, Saucier, October 27. 1939: 1 ♂, 2 ♀, Saucier, February 7 and 24, October 30. 1940: 2 ♀, Saucier, November 6, December 23; 1 ♀, Biloxi, November 9. 1942: 1 ♂, 1 ♀, Saucier, January 23; 2 ♀, Gulfport, October 28, November 11.

The Vesper Sparrow is a fairly common winter resident on the Mississippi coast. Small flocks appear each year late in October or early in November, and are found in the open fields and pastures on the mainland until the latter part of the following March. Apparently very few of these sparrows attempt to reach the islands. My only record is that of a bird seen on Deer Island November 1, 1937. The average flock noted contained from three to five individuals, although from time to time as many as eight were observed feeding together. The earliest date of arrival in the fall is October 27 (1938); the latest date of departure in the spring is March 31 (1938).

Pooecetes gramineus confinis Baird
Western Vesper Sparrow

1936: 1 ♀, Saucier, December 8. 1941: 1 ♂, Saucier, January 7.

This western race of the Vesper Sparrow appears to be of at least casual occurrence on the Mississippi coast during the winter months, although it has not heretofore been recorded farther east than Louisiana. The specimens listed above were compared with typical examples of *confinis*, and were found to be similar in every respect.

POOECETES GRAMINEUS POLIUS BRAUND AND ALDRICH
NORTHERN VESPER SPARROW

1938: 1 ♀, Gulfport, March 31. 1940: 2 ♂, Gulfport, March 4. 1941: 1 ♀, Gulfport, March 14.

This subspecies recently described from northern Michigan is darker and grayer than typical *gramineus,* and appears to be a valid race. The four specimens listed above show these characteristics adequately, and are referred without hesitation to this northern form of the Vesper Sparrow. John W. Aldrich has examined the three specimens taken in 1938 and 1940, and concurs in the identification.

CHONDESTES GRAMMACUS GRAMMACUS (SAY)
EASTERN LARK SPARROW

1942: 1 ♀ im., Gulfport, August 16.

The Lark Sparrow is alleged to winter regularly in southern Mississippi, and a comment to that effect appears in the 1941 A. O. U. Check-List. This statement is incorrect so far as the present day status of the species is concerned. During my eight years of intensive field work on the Mississippi coast, the Lark Sparrow was found to be a very scarce fall transient that was noted only in August on a few occasions. Although it is possible that in past years a few birds may have been seen in the southern part of the State during the winter months, these records must be accepted as largely accidental; therefore, southern Mississippi should be excluded from the normal winter range of this species. The Lark Sparrow is a conspicious bird and not one to be easily overlooked, especially since its preferred habitat is the more open country rather than the thickly wooded areas. My few records are for single birds seen at Gulfport on August 25 and 30, 1937, and August 16, 1942. Allison (1899) lists a specimen taken by H. H. Kopman at Beauvoir on September 4, 1897.

CHONDESTES GRAMMACUS STRIGATUS SWAINSON
WESTERN LARK SPARROW

1942: 1 ♂, Deer Island, November 3.

Decidedly unexpected was the presence of a Lark Sparrow on Deer Island in November. It was feeding alone at the edge of underbrush fringing a stretch of open beach, and because of the late date was collected to verify the identification. The paleness of its upper parts was at once apparent, and on being compared later with specimens of *strigatus,* it was found to be typical of this western race.

Aimophila aestivalis bachmanii (Audubon)
Bachman Sparrow

1935: 3 ♂, Saucier, May 9, August 14, December 18; 1 ♂, Gulfport, December 10. 1936: 3 ♂, Saucier, January 23, April 21, December 31; 1 ♀, Gulfport, April 25; 1 ♂ im., Woolmarket, July 24. 1937: 1 ♀, Gulfport, October 3; 1 ♀, Saucier, December 16. 1938: 1 ♂ im., Gulfport, July 16; 1 ♀, Saucier, October 26. 1939: 1 ♀ im., Gulfport, September 10. 1940: 1 ♀, Saucier, November 29; 1 ♀, Gulfport, February 25. 1943: 1 ♂, Saucier, January 20.

The Bachman Sparrow is a fairly common resident species on the Mississippi coast, but is generally distributed through the wide stretches of open pine woods on the mainland. It does not nest on the islands, and is apparently largely of accidental occurrence there late in the fall and in winter months. The one record for this species offshore is that of a single bird seen on Deer Island October 21, 1939. During the winter months these sparrows are quiet and inconspicious, and although present in normal numbers then are seldom seen unless deliberately looked for.

Aimophila aestivalis illinoensis Ridgway
Illinois Sparrow

1935: 1 ♂, Saucier, December 16. 1936: 1 ♂, Saucier, March 6; 1 ♀, Gulfport, April 16. 1938: 2 ♀, Saucier, January 3, November 30. 1939: 2 ♂, 1 ♀, Saucier, January 13, March 14, October 5. 1940: 1 ♂, 1 ♀, Gulfport, February 22, March 17.

On the basis of actual specimens taken this mid-western race can be considered a regular and not uncommon winter resident in southern Mississippi. It appears in the fall early in October, and lingers in the spring until the middle of April. Unlike *bachmanii*, it showed a preference for thickets at the sides of the roads, or at the edges of the scattered open fields, and was rarely found in the open pine woods. Although the validity of *illinoensis* has long been questioned, it appears to be a well-marked race, and one worthy of subspecific status. The small series listed above differs noticeably from typical *bachmanii* in being distinctly paler above and below, and with the black streaking on the upper parts covering a smaller area.

Junco hyemalis hyemalis (Linnaeus)
Slate-colored Junco

1937: 2 ♀, Saucier, November 29, December 14. 1938: 1 ♀, Saucier, November 28. 1939: 1 ♂, 3 ♀, Saucier, February 9, March 1, November 6, December 5. 1940: 2 ♀, Gulfport, January 28, February 1; 2 ♀, Cat Island, February 4; 1 ♂, Biloxi, February 17; 2 ♀, Saucier, November 28, December 17. 1941: 1 ♀, Deer Island, November 26. 1942: 1 ♀, Saucier, November 12.

The Junco is a regular but somewhat scarce winter resident on the Mississippi coast. A few birds appear each fall, usually after the middle

of November, and are seen at infrequent intervals then throughout the winter months. Ordinarily three or four could be found feeding together about a thicket or a patch of underbrush, although single birds were not infrequently seen in the open pine woods. Only rarely do they reach the islands. I have two records for Deer Island (single birds November 26, 1941, and March 2, 1943), and one for Cat Island (a flock of three birds, all females, February 4, 1940). The earliest date of arrival in the fall is November 6 (1939); the latest date of departure in the spring is March 2 (1943).

Spizella passerina passerina (Beckstein)
Eastern Chipping Sparrow

1935: 1 ♂, Gulfport, October 25; 1 ♂, Saucier, December 3. 1936: 1 ♂, Woolmarket, June 5. 1937: 2 ♀, Gulfport, August 3; 1 ♂, 1 ♀, Deer Island, November 23. 1938: 1 ♀. Deer Island, October 29. 1939: 1 ♀ im., Deer Island, October 13. 1940: 1 ♀, Deer Island, November 21; 1 ♀, Saucier, December 27. 1942: 2 ♂, Biloxi, February 24, December 25; 1 ♂, Deer Island, November 8. 1943: 1 ♀, Gulfport, March 16; 1 ♂, Deer Island, May 24.

The Chipping Sparrow is a resident species in southern Mississippi, but common only during the fall and the winter months. Near the coast it breeds very sparingly, and is limited in its distribution to a few scattered areas where the loblolly pine (*Pinus taeda*) occurs. Singing males were seen early in June at Woolmarket and near Saucier, and there are doubtless other places where breeding pairs could be found. Late in October numerous flocks appear in the open pine woods. These sparrows are then plentiful on the mainland until the following April. On the islands they are rather irregular in their occurrence, and apparently rarely go far offshore. A small flock was noted on Cat Island on February 12, 1937, but otherwise all my records are for Deer Island. There an occasional bird was seen during the late fall months (extreme dates of occurrence, October 13, 1939 and November 23, 1937). It was noted only once in the spring. On May 24, 1943 an adult male, unquestionably a breeding bird from the mainland, rather unexpectedly appeared in the open pine woods at the western end of Deer Island.

Spizella pallida (Swainson)
Clay-colored Sparrow

1938: 1 ♂, Saucier, October 26.

The male taken at Saucier, feeding with Field Sparrows about a thicket at the edge of a corn field, is the only record for the occurrence of this species on the Mississippi coast.

SPIZELLA PUSILLA PUSILLA (WILSON)
EASTERN FIELD SPARROW

1935: 2 ♀, Saucier, November 6 and 13; 1 ♀, Pass Christian, November 30. 1936: 1 ♂, 6 ♀, Saucier, February 17, March 2, 13 and 26, April 1, November 7 and 19. 1937: 1 ♂, 1 ♀, Gulfport, January 10, December 25; 2 ♀, Saucier, April 9, October 29; 1 ♂, Horn Island, November 4. 1938: 1 ♂, 1 ♀, Saucier, January 18, December 20; 2 ♀, Gulfport, March 31, October 28; 1 ♂, Deer Island, December 1. 1939: 2 ♀, Saucier, January 24, December 21; 2 ♀, Deer Island, January 26, November 4; 1 ♀, Gulfport, January 29. 1940: 1 ♂, 5 ♀, Saucier, February 2 and 8, April 9 and 17, November 22, December 17; 3 ♂, 2 ♀, Gulfport, February 18, March 11 and 17, April 14, November 7. 1941: 1 ♀, Bay St. Louis, February 15; 1 ♂, 2 ♀, Gulfport, March 9, November 27 and 30. 1942: 1 ♀, Biloxi, January 10; 1 ♀, Saucier, November 4; 1 ♂, Gulfport, November 9; 1 ♀, Deer Island, November 13. 1934: 2 ♀, Gulfport, March 20, April 4.

The Field Sparrow is a common winter resident on the Mississippi coast. Numerous small flocks are seen in thickets and underbrush on the mainland from the latter part of October until the middle of the following April. On Deer Island single birds, rarely small flocks, were noted at infrequent intervals during the late fall and winter months (extreme dates of occurrence are November 4, 1939 and February 13, 1940), but at no time was this species observed in large numbers there. For the outer islands, I have only one record, three birds seen on Horn Island, in a thicket at the edge of the open pine woods, on November 4, 1937. On the mainland the earliest date of arrival in the fall is October 28 (1938); the latest date of departure in the spring is April 23 (1940). There is only one known instance of this species breeding on the coast. Arthur H. Howell (MS) found a pair of Field Sparrows nesting at Biloxi May 26, 1911, and collected the male bird on that date to verify the identification.

In the series of forty-six specimens taken on the coast, approximately 25 per cent were found to be intermediate in their characters. Although they approached *arenacea* somewhat in the paleness of their upper parts, the difference from typical *pusilla* was not considered sufficient to warrant referring them to the western race. It is possible that they represent an undescribed subspecies, but further material from the breeding range of these birds will have to be critically examined before this question can be answered.

ZONOTRICHIA QUERULA (NUTTALL)
HARRIS SPARROW

1942: 1 ♀, Gulfport, February 17.

The specimen listed above is the one record for the occurrence of this species on the Mississippi coast. It was feeding with a flock of White-

throated Sparrows about a thicket at the edge of an open, swampy woods, and was at once recognized because of its large size and characteristic actions.

Zonotrichia leucophrys leucophrys (Forster)
White-crowned Sparrow

1937: 1 ♂ im., Saucier, October 18. 1938: 1 ♀ im., Saucier, October 27. 1939: 1 ♀ im., Saucier, October 31.

The White-crowned Sparrow is an exceedingly scarce fall transient on the Mississippi coast for I have no records other than those listed above. The individuals noted were without exception feeding alone about thickets in open fields.

Zonotrichia leucophrys gambelii (Nuttall)
Gambel Sparrow

1936: 1 ♀ im., Saucier, October 12. 1940: 1 ♀ im., Deer Island, October 26.

On the basis of actual specimens taken, *gambelii* appears to be almost as common a fall transient on the coast as typical *leucophrys*. The female taken on Deer Island was feeding about a palmetto thicket in the open pine woods, and seemed rather out of place in such a situation.

Zonotrichia albicollis (Gmelin)
White-throated Sparrow

1935: 1 ♀ im., Gulfport, October 26; 1 ♀, Saucier, November 7. 1936: 3 ♀, Saucier, February 17, April 20, November 19. 1937: 1 ♂, Cat Island, February 24; 1 ♂, 2 ♀, Gulfport, April 24 and 27, October 21; 1 ♀, Deer Island, April 30. 1939: 1 ♂, Gulfport, February 12. 1940: 1 ♀, Gulfport, April 28; 1 ♀, Biloxi, May 2; 1 ♀, Saucier, October 22. 1942: 1 ♀, Gulfport, May 2; 1 ♀ im., Deer Island, November 13. 1943: 1 ♀, Biloxi, April 30.

The White-throated Sparrow is a common winter resident on the Mississippi coast. It appears in the fall shortly after the middle of October, and lingers in the spring until early in May. It is equally plentiful on the mainland and on the islands, small flocks occurring about the thickets and stretches of underbrush in the more open woods. On Deer Island this species was rarely seen before the first of November (earliest date of arrival, October 29, 1938), but it was always present there throughout the winter months, and not infrequently was noted as late as the end of April (April 30, 1937). The earliest date of arrival in the fall, on the mainland, is October 19 (1937); the latest date of departure in the spring is May 11 (1940).

Passerella iliaca iliaca (Merrem)
Eastern Fox Sparrow

1940: 1 ♂, 1 ♀, Saucier, January 24; 3 ♂, Deer Island, January 25 and 31; 10 ♂, 2 ♀, Gulfport, January 26, 28, 30, February 1, 3, 9, 10, 15, 18, 22, and 24; 1 ♀, Biloxi, February 17.

This hardy sparrow apparently does not ordinarily winter as far south as the Gulf coast, for it was not until the abnormally severe weather of January, 1940, with the resulting deep snows and near zero temperatures over the larger part of the State, that the species was recorded for the first time on the Mississippi coast. The first small flock of four birds was noted at Saucier on January 24, and almost at once this species became plentiful, and was found literally everywhere. Scattered small flocks, totaling possibly twenty individuals, were seen on Deer Island on January 25. Similar flocks were observed about Gulfport and Biloxi the following day in all the stretches of woods bordering the streams. For three weeks no perceptible decrease in numbers was noted, but after the middle of February, fewer and smaller flocks were seen. By the end of the month the last bird had disappeared. The latest record for Deer Island is that of two birds about a palmetto thicket in the open pine woods on February 13, while on the mainland, at Gulfport, a single bird was observed for the last time on February 25, feeding with White-throated Sparrows at the edge of a field.

Melospiza lincolnii lincolnii (Audubon)
Lincoln Sparrow

1936: 2 ♂, Gulfport, March 14, November 26. 1937: 1 ♂, Deer Island, November 1; 1 ♂, 1 ♀, Gulfport, December 12 and 19. 1938: 1 ♂, Gulfport, January 1. 1939: 1 ♀, Gulfport, November 18. 1940: 2 ♂, Gulfport, January 30, December 11. 1941: 1 ♀, Deer Island, May 7.

The Lincoln Sparrow is a regular but somewhat scarce winter resident on the Mississippi coast, and is very largely limited in its distribution to thickets and underbrush fringing the streams on the mainland. In as much as it is rather shy and inconspicuous and associates throughout the winter months with other sparrows, it can easily be overlooked, and may be more common than my infrequent records indicate. It is usually the middle of November before it is first noted in the fall, after which an occasional bird is observed until the following March. I have two records for Deer Island, and both, oddly enough, mark my extreme dates of occurrence for this species on the coast. On November 1, 1937, a single bird was seen there about a thicket at the edge of the open pine woods, and on

May 7, 1941, one bird was again seen at almost this same spot. At Gulfport the earliest date of arrival in the fall is November 18, 1939; the latest date of departure in the spring is March 14, 1936.

Melospiza georgiana georgiana (Latham)
Eastern Swamp Sparrow

1935: 1 ♀, Saucier, December 16; 1 ♂, Gulfport, December 25. 1936: 3 ♀, Gulfport, April 22, November 26, December 30. 1937: 5 ♀, Gulfport, January 17, May 1, September 28, November 16, December 29. 1938: 1 ♂, Pearlington, March 18. 1939: 1 ♂, Horn Island, January 21; 1 ♂, 1 ♀, Gulfport, February 5, December 24. 1940: 1 ♂, Biloxi, March 15; 1 ♀, Bay St. Louis, May 4; 1 ♀, Gulfport, November 20; 1 ♂, Saucier, November 22. 1941: 2 ♀, Gulfport, February 12, December 19; 1 ♂, Saucier, October 9; 1 ♀, Biloxi, December 20. 1942: 2 ♂, 7 ♀, Gulfport, January 9, February 20, 21 and 27, April 24 and 28, May 2, November 28, December 27; 2 ♀, Deer Island, January 21, December 1; 3 ♀, Saucier, February 26, November 12; 1 ♀, Ocean Springs, December 17. 1943: 1 ♂, 1 ♀, Gulfport, January 3, April 29; 1 ♂, Biloxi, January 6; 1 ♂, Saucier, January 13; 1 ♂, Deer Island, March 11.

The Swamp Sparrow is a common winter resident on the Mississippi coast, being equally numerous on the mainland and on all the islands. The first arrivals usually appear in the fall the last of September, and within a week or two small flocks can be found about many of the thickets and stretches of underbrush fringing the streams and the scattered open marsh. Although more plentiful in the vicinity of water, these sparrows are frequently seen about thickets in fields and pastures, and are not uncommon throughout the winter months in fields overgrown with broomsedge. In the spring the winter populations do not decrease perceptibly until the middle of April and it is early May before the last individual disappears. The earliest date of arrival in the fall is September 27 (1937); the latest date of departure in the spring, May 5 (1942).

Melospiza georgiana ericrypta Oberholser
Northern Swamp Sparrow

1935: 1 ♀, Deer Island, October 7. 1936: 1 ♀, Gulfport, February 19; 1 ♀, Deer Island, September 30. 1937: 1 ♂, Cat Island, February 12; 1 ♂, 1 ♀, Gulfport, May 3, September 28. 1940: 1 ♀, Gulfport, December 29. 1942: 2 ♂, Gulfport, February 20 and 21.

Out of a total of fifty-one Swamp Sparrows taken on the Mississippi coast only nine were found referable to *ericrypta*. Apparently this northern race is rather uncommon on the Gulf coast during the winter months.

Melospiza melodia melodia (Wilson)
Eastern Song Sparrow

1936: 2 ♀, Saucier, January 7, November 3. 1938: 1 ♀, Saucier, October 26. 1939: 1 ♀, Saucier, February 16, 1943: 1 ♂, Deer Island, March 11.

As might be expected, this eastern race of the Song Sparrow is merely of casual occurrence on the Mississippi coast during the winter months. It is doubtful if it is ever more common than the few collected specimens indicate.

Melospiza melodia juddi Bishop
Dakota Song Sparrow

1937: 1 ♀, Petit Bois Island, December 21. 1939: 1 ♀, Saucier, December 12.

Although not typical, the two specimens listed above are here tentatively referred to *juddi,* pending a proposed revision of the Song Sparrow. Both are distinct from *euphonia.* They resemble *juddi,* although they may represent an undescribed race.

Melospiza melodia euphonia Wetmore
Mississippi Song Sparrow

1935: 2 ♀, Gulfport, October 25, November 11. 1936: 1 ♂, 2 ♀, Saucier, January 3, March 13, December 31; 1 ♀, Deer Island, November 24. 1937: 1 ♂, 4 ♀, Gulfport, November 6, and 21, December 4, 24, and 28; 1 ♂, Deer Island, December 31. 1938: 1 ♂, 1 ♀, Saucier, January 3, November 10; 1 ♀, Horn Island, March 20 (G. M. Sutton); 1 ♀, Deer Island, December 1. 1939: 2 ♂, 2 ♀, Saucier, January 13 and 30, March 3, October 30; 1 ♀, Deer Island, February 22. 1940: 1 ♂, 1 ♀, Gulfport, February 3, November 7; 1 ♂, Biloxi, February 17; 2 ♀, Saucier, February 23, November 22. 1941: 4 ♂, 3 ♀, Gulfport, February 11, March 19, 24, and 27, April 4, October 24, December 5. 1942: 1 ♂, 4 ♀, Gulfport, January 14, March 5, October 28, December 9 and 18. 1943: 3 ♀, Gulfport, January 9 and 10, February 17; 1 ♀, Deer Island, January 12.

This mid-western race is the characteristic Song Sparrow of the Mississippi coast. It is a fairly common winter resident on the mainland, and although somewhat scarce on the islands, it is of regular occurrence offshore. On Deer Island a few birds are noted each winter (extreme dates of occurrence are November 5, 1938, and March 11, 1943), and there is one record for Horn Island (March 20, 1938). On the mainland an occasional bird generally appears toward the end of October, and by the middle of November these familiar birds are always present about many of the thickets and stretches of underbrush at the edges of the fields. Early in March sees a noticeable decrease in the number that winter, and only rarely is one seen after the first of April. My earliest date of arrival in the fall is October 24 (1941); my latest date of departure in the spring, April 4 (1941).

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